

## **6.0 Changes to Avoidance, Minimization, and Mitigation Measures Since Last Document Was Approved**

Caltrans and the City completed a Section 7 consultation that included discussion of impacts on kit fox mortality as a result of vehicle strikes. The Westside Parkway includes design features (e.g., crossing structures and fencing) approved by the USFWS and California Department of Fish and Wildlife (formerly known as the California Department of Fish and Game) that are intended to facilitate safe kit fox passage. The Westside Parkway project also includes a three-year monitoring program that will be implemented following construction to evaluate kit fox use of the crossing structures. Caltrans and the City intend to continue to work collaboratively with the USFWS and the CDFW to ensure that program impacts to the kit fox are adequately mitigated. No additional avoidance and minimization measures will be necessary when redesignating the Westside Parkway to SR 58.

### **Mitigation Measures**

The transfer of the Westside Parkway to the State Highway System would cause no additional loss of San Joaquin kit fox habitat. Compensatory mitigation to ensure no-net-loss of kit fox habitat has already been analyzed in the 2006 EA/EIR.

### **Cumulative Effects**

In addition to the project-specific avoidance, minimization, and compensatory mitigation measures provided by the Westside Parkway, the Centennial Corridor project (which includes the change in designation to SR 58) is proposing to mitigate for cumulative effects of the Thomas Road Improvement Program (TRIP) road improvement projects by implementing the Sump Habitat Program, which is intended to provide long-term habitat conservation for the urban kit fox population. The conservation goals of the program would be achieved by installing artificial dens in selected sumps; enhancing kit fox habitat by controlling vegetation in and around dens; increasing kit fox accessibility to sumps through fence/gate gaps; and reducing the potential for impacts to kit foxes associated with regular maintenance activities. The program is currently being developed with the USFWS and the CDFW and will continue to be refined through an ongoing collaborative consultation process among Caltrans, the City, the USFWS, and the CDFW. Caltrans and the City have identified the Wildlife Heritage Foundation, a non-profit land trust, as an option to hold endowments necessary to fully fund the Sump Habitat Program and conservation easement oversight.

## **7.0 Changes to Environmental Commitment Since Last Document was Approved**

No changes to environmental commitments arise from the design changes to the Westside Parkway studied for this revalidation report on biological resources.

### **List of Preparers**

Amber Oneal, Senior Project Manager/Ecologist, Master of Science, Biology, University of California, Riverside; 15 years experience in ecology and environmental documentation. Contribution: Lead Author

Allison Rudalevige, Ecologist and Regulatory Technician, Master of Science, Biology, University of California, Riverside; 8 years experience in biological and jurisdictional resources. Assisted in the preparation of the memo.

### **References**

Bakersfield, City of and California Department of Transportation District 6 (Bakersfield and Caltrans). 2010 (March). *Thomas Roads Improvement Program San Joaquin Kit Fox Effects Analysis, Mitigation Strategy, and Implementation Plan*. Bakersfield, CA: the City.

Bjurlin, C.D., B.L. Cypher, C.M. Wingert, and C.L. Van Horn Job. 2005 (July). *Urban Roads and the Endangered San Joaquin Kit Fox: Final Report Submitted to the California Department of Transportation* (Contract Number 65A0136). Fresno, CA: California State University, Stanislaus, Endangered Species Recovery Program.

U.S. Fish and Wildlife Service (USFWS). 2011. Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. Sacramento, CA: USFWS.



Riparian woodland/Great Valley cottonwood riparian forest vegetation in spreading grounds west of Allen Road (Goose Lake Slough) in the BSA for Segment 2.



Detention basin north of Stockdale Highway in the BSA for Segment 2.

## Site Photographs

Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484




**Attachment A**







Detention basin east of Allen Road in the BSA for Segment 2 (Goose Lake Slough).

Site Photographs	
Centennial Corridor, Kern County, California	
D6-KERN-58 - PM T31.7 to PM R55.6	
D6-KERN-99 - PM 21.2 to PM 26.2	
Project ID# 06-0000-0484	

Attachment A



## **Attachment 1**      USFWS Species List

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**United States Department of the Interior**  
**FISH AND WILDLIFE SERVICE**  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825



August 30, 2012

Document Number: 120830125104

Subject: Species List for Centennial Corridor

Dear: Interested party

We are sending this official species list in response to your August 30, 2012 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 28, 2012.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found [here](#).

**Endangered Species Division**



**U.S. Fish & Wildlife Service**  
**Sacramento Fish & Wildlife Office**  
**Federal Endangered and Threatened Species that Occur in**  
**or may be Affected by Projects in the Counties and/or**  
**U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 120830125104

Database Last Updated: September 18, 2011

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Quad Lists

Listed Species

Invertebrates

- Branchinecta lynchi*  
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle (T)

Fish

- Hypomesus transpacificus*  
delta smelt (T)

Amphibians

- Rana draytonii*  
California red-legged frog (T)

Reptiles

- Gambelia (=Crotaphytus) sila*  
blunt-nosed leopard lizard (E)
- Thamnophis gigas*  
giant garter snake (T)

Birds

- Charadrius alexandrinus nivosus*  
western snowy plover (T)
- Empidonax traillii extimus*  
southwestern willow flycatcher (E)
- Gymnogyps californianus*  
California condor (E)

Mammals

- Dipodomys ingens*  
giant kangaroo rat (E)
- Dipodomys nitratoides nitratoides*  
Tipton kangaroo rat (E)
- Sorex ornatus relictus*  
Buena Vista Lake shrew (E)
- Vulpes macrotis mutica*  
San Joaquin kit fox (E)

Plants

*Caulanthus californicus*

California jewelflower (E)

*Eremalche kernensis*

Kern mallow (E)

*Monolopia congdonii* (= *Lembertia congdonii*)

San Joaquin woolly-threads (E)

*Opuntia treleasei*

Bakersfield cactus (E)

**Quads Containing Listed, Proposed or Candidate Species:**

WEED PATCH (214B)

CONNER (215A)

MILLUX (215B)

MOUTH OF KERN (216A)

TAFT (216B)

OIL CENTER (239B)

LAMONT (239C)

EDISON (239D)

OILDALE (240A)

ROSEDALE (240B)

STEVENS (240C)

GOSFORD (240D)

RIO BRAVO (241A)

BUTTONWILLOW (241B)

EAST ELK HILLS (241C)

TUPMAN (241D)

NORTH OF OILDALE (263D)

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**County Lists**

No county species lists requested.

**Key:**

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

*Critical Habitat* - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

**Important Information About Your Species List**

**How We Make Species Lists**

We store information about endangered and threatened species lists by U.S. Geological



Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

### Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

### Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

### Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.  
During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.



Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

### Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

### Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

### Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

### Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

### Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 28, 2012.



## **Appendix B** Segment 3 – Biological Constraints Report

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## **Centennial Corridor Segment 3 Biological Resources Technical Memorandum**

**December 2011**

### **Purpose of the Technical Memorandum**

The California Department of Transportation (Caltrans) proposes to establish a new alignment for State Route (SR) 58, which would provide a continuous route along SR 58 from Interstate (I) 5 via the Westside Parkway to Cottonwood Road on existing SR 58, east of SR 99 (post miles T31.7 to R55.6). Improvements to SR 99 (post mile 21.2 to 26.2) would also be required to accommodate the connection with SR 58. The proposed continuous route, known as the Centennial Corridor, has been divided into three distinct segments. The segments of the corridor are shown in Figure 1. A Natural Environment Study (NES) has been prepared for Segment 1. Segment 2 is composed of the Westside Parkway and extends from about Mohawk Street to Heath Road. This segment would be transferred into the State Highway System.

Segment 3, the focus of this technical memorandum, extends from Heath Road to I-5. The construction timing for this segment is unknown, but would not occur until there is sufficient funding and greater traffic demand. Therefore, the analysis of Segment 3 has been done at a conceptual level (Tier 1<sup>4</sup>). The approval being sought is route adoption, with more detailed analysis occurring at the time construction is proposed.

An alignment for Segment 3 was identified as part of the 2002 *Route 58 Route Adoption Project Tier I Environmental Impact Statement/Environmental Impact Report* (EIS/EIR). The analysis contained herein will incorporate the results of that study, and will update and re-evaluate those findings. A Tier II (project-level) document will be prepared for Segment 3 as a separate documentation effort at a later time when funding becomes available.

Information on Segment 3 was obtained from the *Route 58 Route Adoption Project Tier I EIR/EIS* (Caltrans et al. 2002) and the *Biological Assessment for Route 58 Adoption Project, Interstate 5 to State Route 99* (Caltrans et al. 1998). Based on the

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<sup>4</sup> A Tier I document evaluates the impacts at a programmatic level (i.e., conceptual level). This approach is used when facility construction is not anticipated in the foreseeable future. The Tier I document allows the preservation and acquisition of right-of-way. As such, a Tier I document is not adequate to address construction-level impacts. Therefore, subsequent documentation will be required before the project can move forward into the detailed engineering phase.

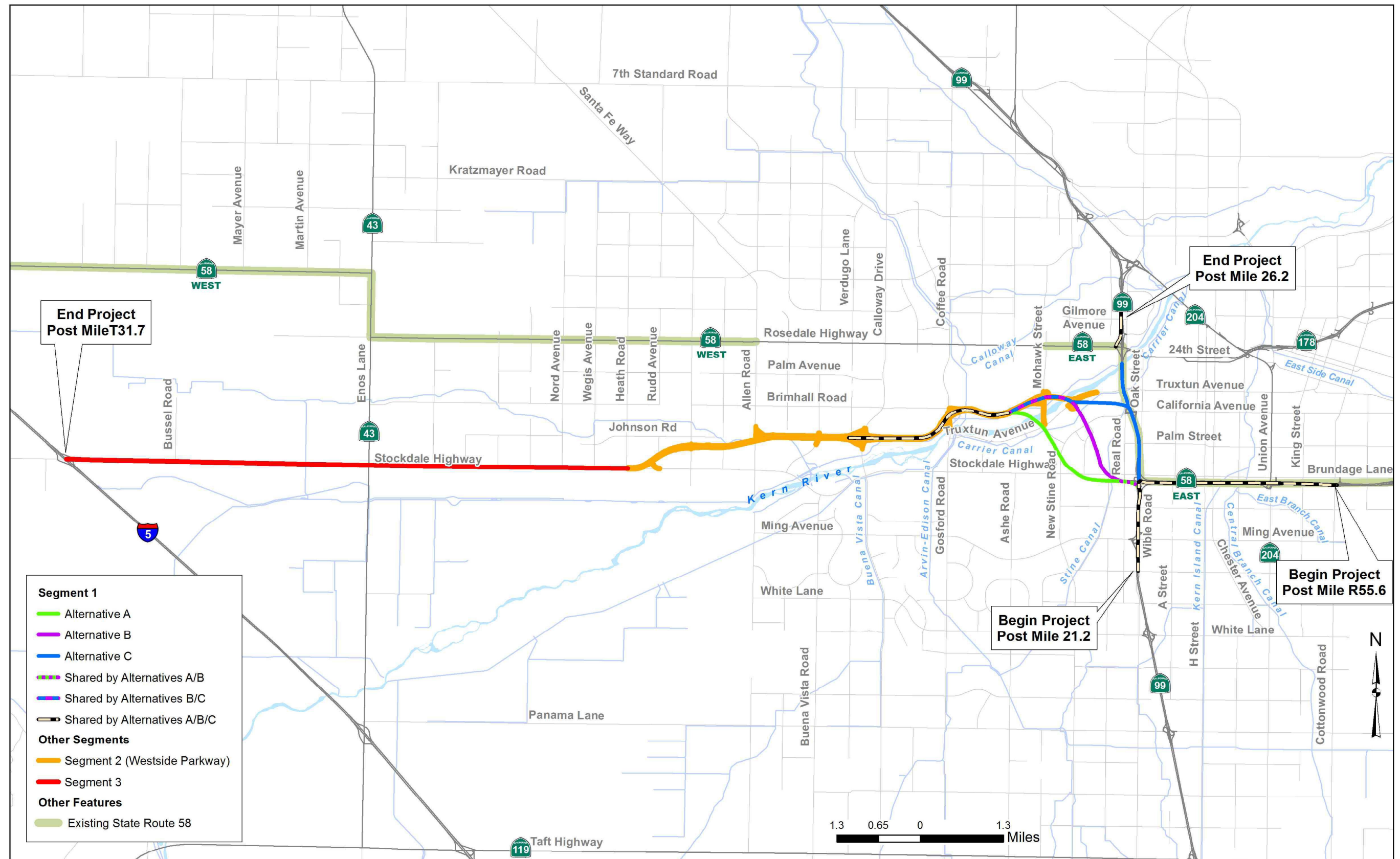
Tier I route adoption evaluation, the Cross Valley Canal Option was selected as the Least Damaging Practicable Alternative and will be addressed in this analysis.

## **Biological Study Area**

The Biological Study Area (BSA) for this report consists of the Segment 3 alignment (Cross Valley Canal Option), including a 500-foot buffer on either side of the proposed right-of-way (Figures 2A–2B). The alignment generally follows the Cross Valley Canal, which is south of the alignment, from the Westside Parkway's (Segment 2) planned terminus at Heath Road, west to I-5. From the Westside Parkway's terminus, the alignment would angle southwest to Heath Road and then assume an east-west direction for approximately six miles before angling slightly southwest for approximately 1.5 miles to its ultimate connection with I-5 near the Cross Valley Canal.

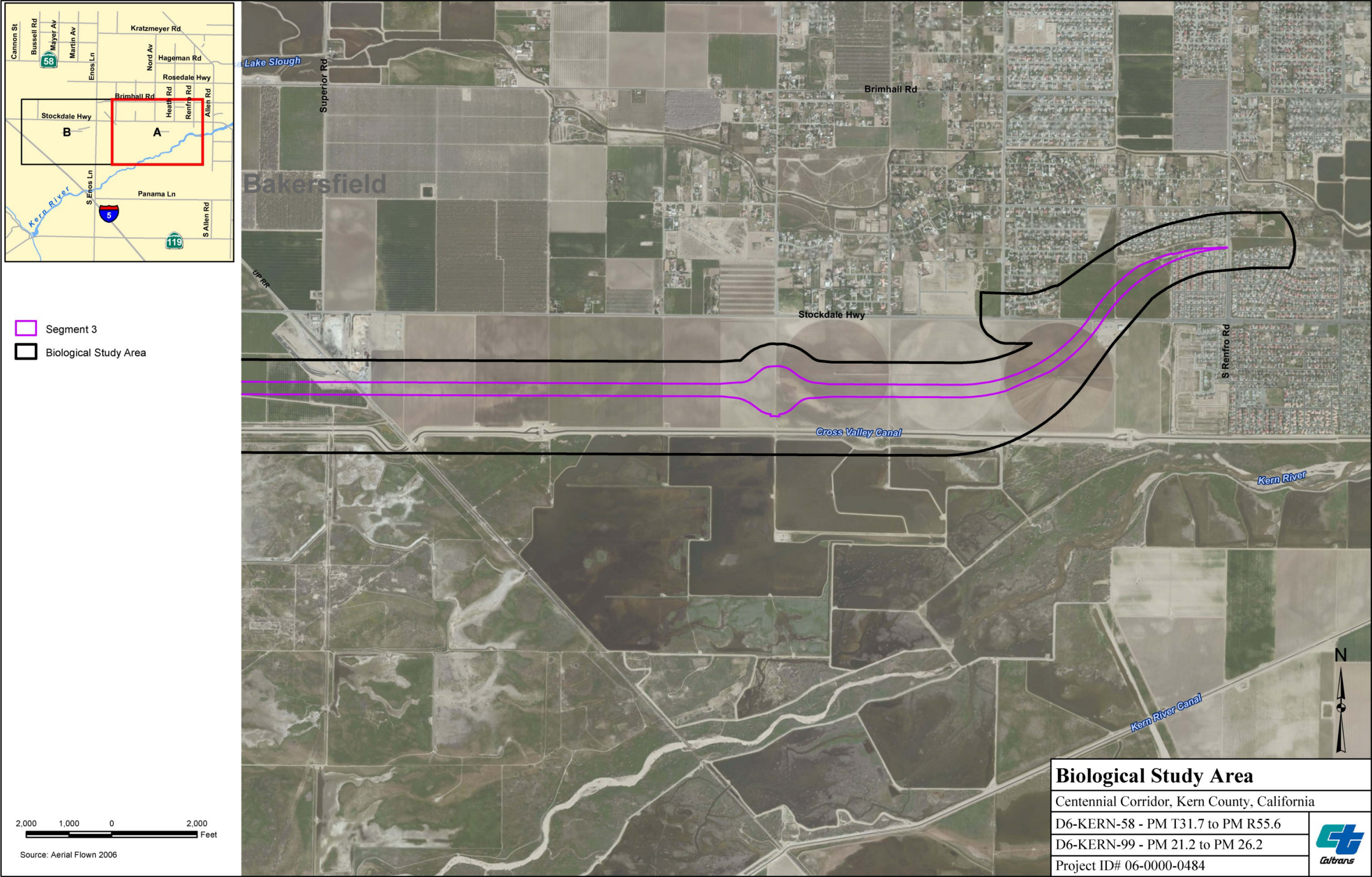
Land uses in the BSA are primarily rural, including agricultural operations and water storage districts; little development is present. The Union Pacific Railroad crosses the alignment approximately one mile east of State Route 43. One blueline stream crosses the BSA near State Route 43, and the Kern Water Bank is located both north and south of the alignment between State Route 43 and I-5. The Cross Valley Canal parallels the alignment to the south. The Pioneer Canal crosses the BSA approximately 1.5 miles east of I-5.

Soil types present in Segment 3 include Cajon loamy sand (0 to 2 percent slopes); Cajon sandy loam, overblown (0 to 2 percent slopes); Excelsior sandy loam; Garces silt loam; Kimberlina fine sandy loam (0 to 2 percent slopes); Kimberlina sandy loam (2 to 5 percent slopes); Lerdo complex, drained; Panoche clay loam, saline-alkali (0 to 2 percent slopes); riverwash; Wasco sandy loam; and Wasco fine sandy loam (Figures 3A–3B).





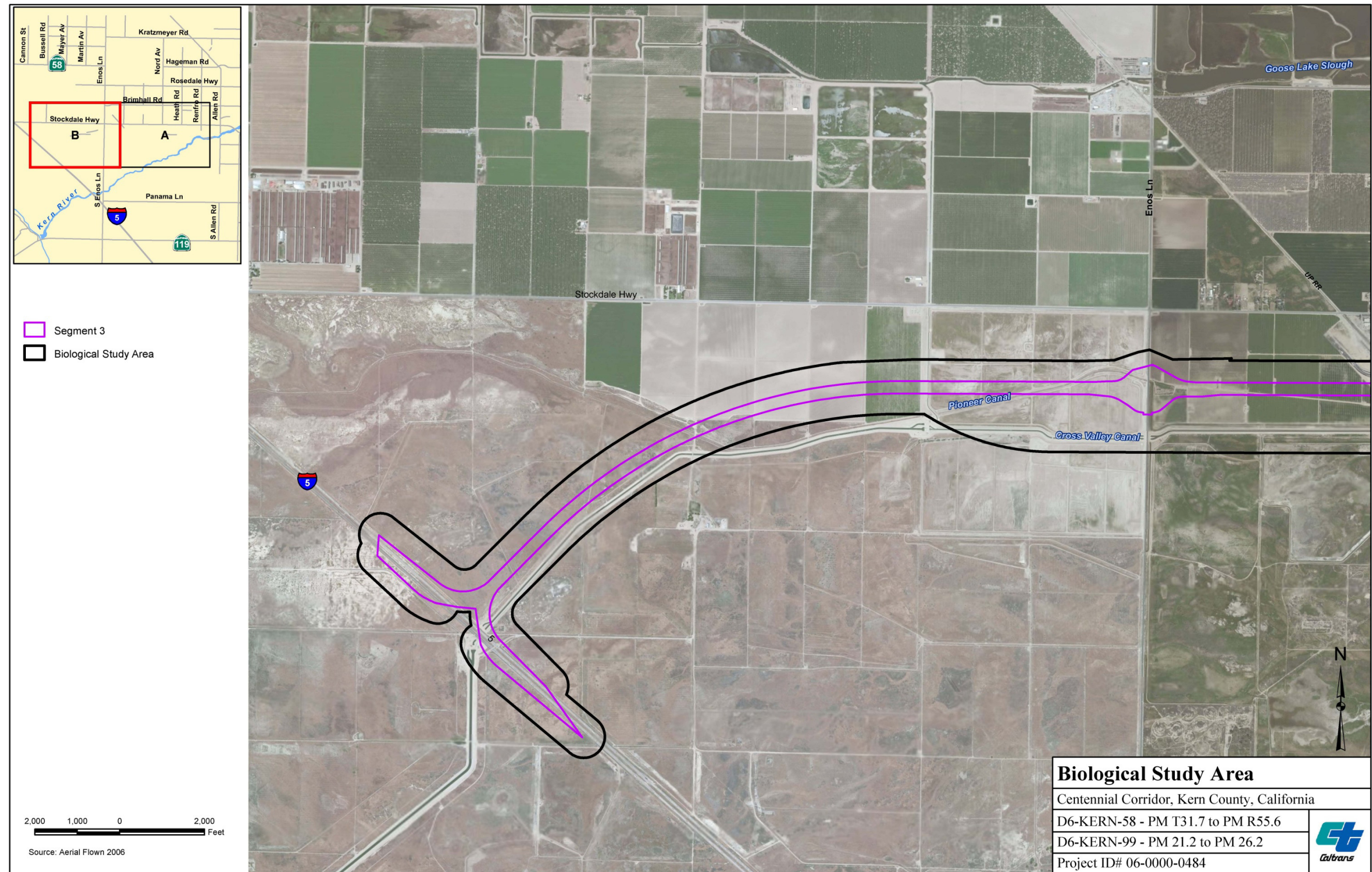


















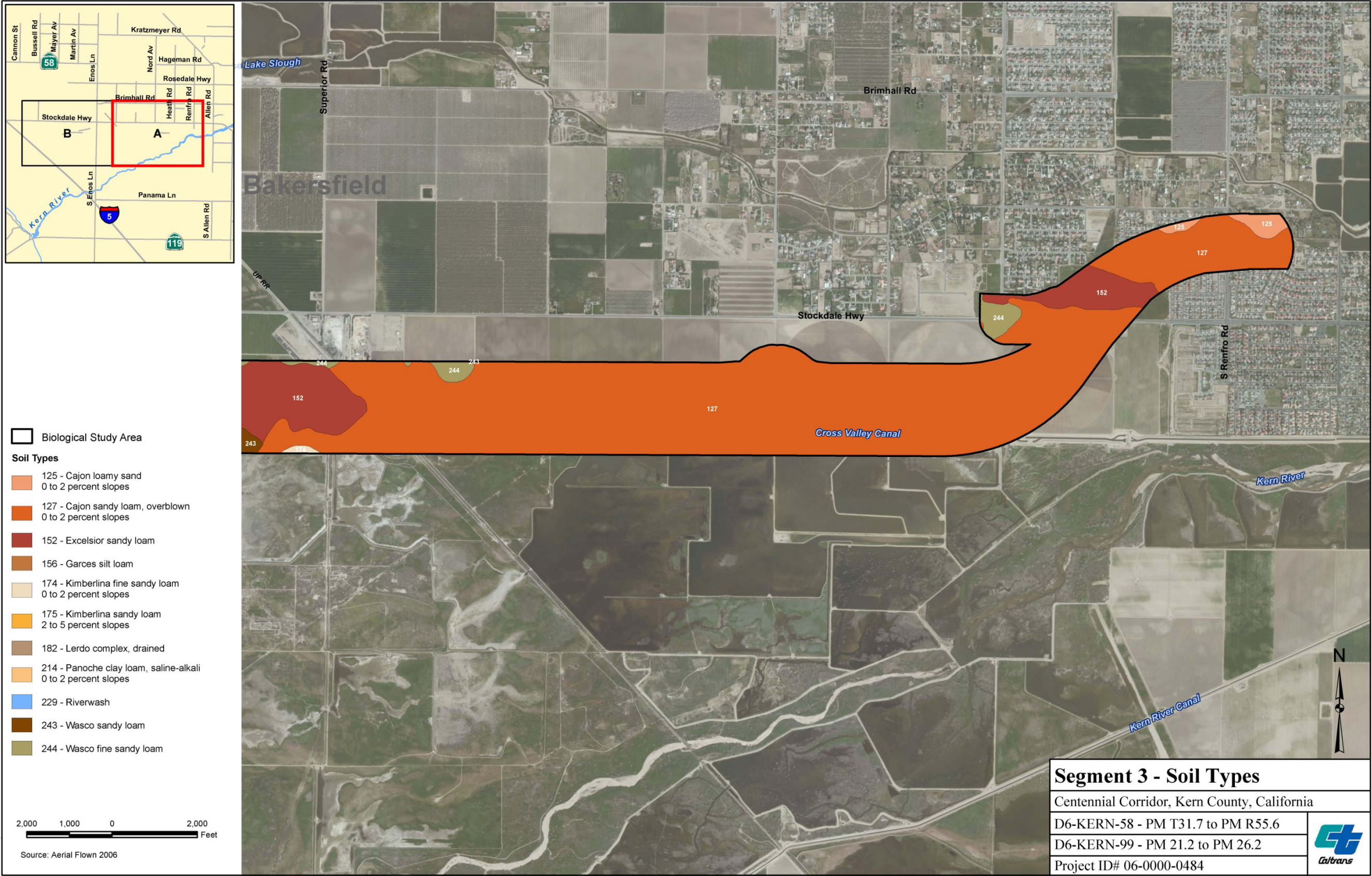


Figure 3A







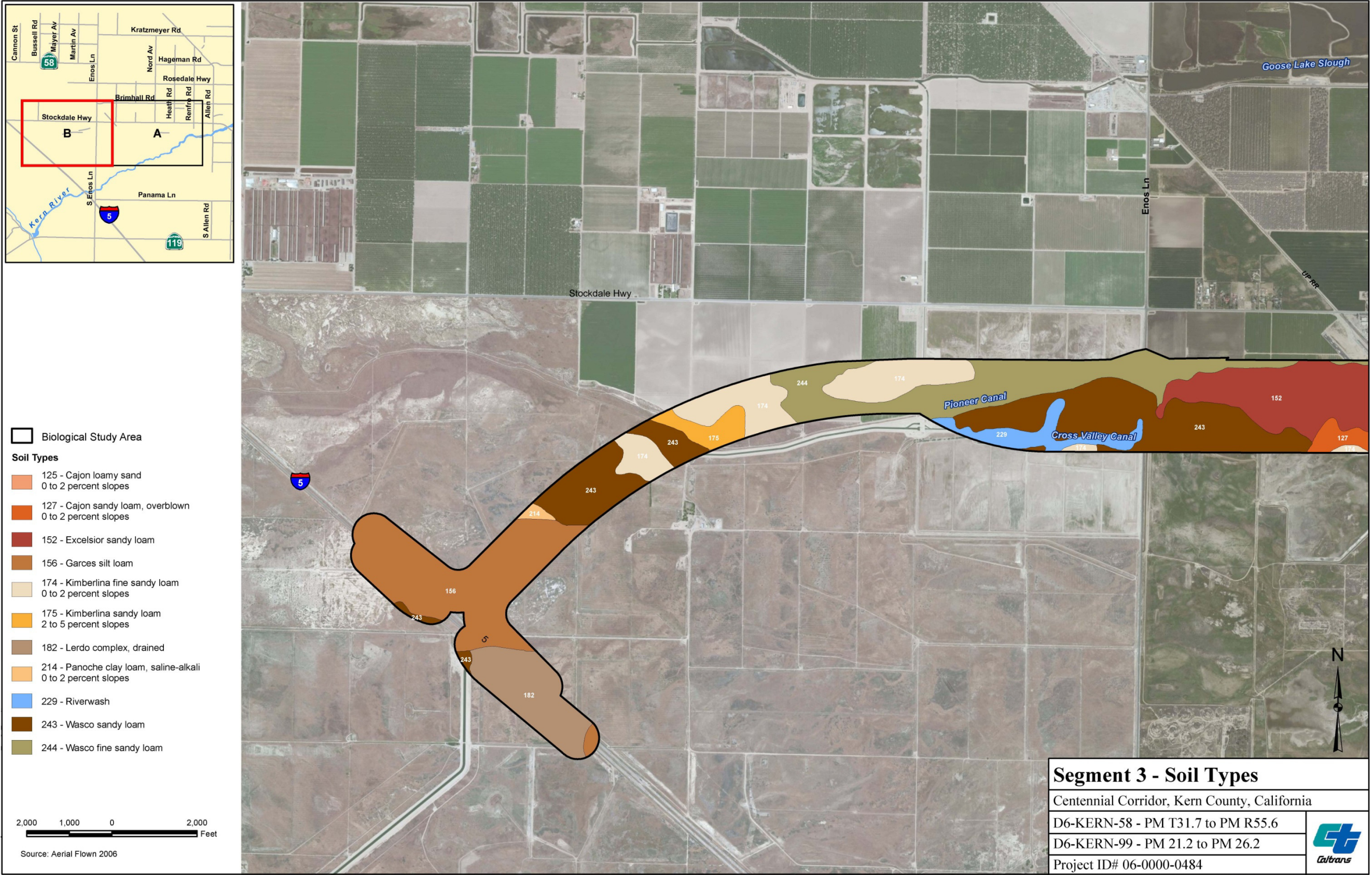


Figure 3B







## Methods

### Literature Review

A list of special status plant and animal species potentially occurring in the BSA or within a ten-mile query radius of the BSA was established by conducting a literature review. This literature review was updated in 2011 during the preparation of the present document. The California Native Plant Society's (CNPS') Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2008, 2009 and 2011; see Appendix C of the NES); the California Department of Fish and Game's (CDFG's) California Natural Diversity Database (CNDDDB) (CDFG 2008, 2009 and 2011, see Appendix C of the NES); and a List of Proposed, Threatened, and Endangered Species (USFWS 2011, see Appendix C of the NES) were reviewed for the U.S. Geologic Survey's (USGS') Conner, Millux, Mouth of Kern, Taft, Gosford, Stevens, Tupman, East Elk Hills, Oildale, Rosedale, Rio Bravo, Buttonwillow, North of Oildale, Weed Patch, Edison, Lamont, and Oil Center 7.5-minute quadrangles. The *Western Rosedale Specific Plan* (Kern County 1994), the *Metropolitan Bakersfield General Plan* (Bakersfield and Kern County 2002), the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) and supporting documentation (Thomas Reid Associates 1990, 1991, 1994), and the U.S. Fish and Wildlife Service's (USFWS') *Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS 1998) were also reviewed.

Other documentation that included information on biological resources in the BSA and in the general project vicinity were reviewed, including the *7<sup>th</sup> Standard Road Widening Environmental Assessment/Initial Study with Proposed Mitigated Negative Declaration* (Caltrans 2006), the *Tier II Environmental Assessment/Final Environmental Impact Report for Westside Parkway* (Bakersfield et al. 2006), the *Kern County Waste Facilities Habitat Conservation Plan* (Kern County Waste Management Department 1997), the *Kern Water Bank Authority Habitat Conservation Plan* (Kern Water Bank Authority 1997), and the *Draft Kern County Valley Floor Habitat Conservation Plan* (Garcia and Associates 2006).

Information on Segment 3 was obtained from the *Biological Assessment for the Route 58 Adoption Project, I-5 to SR- 99* (Caltrans et al. 1998).

### Vegetation Mapping/Wildlife Surveys

Vegetation mapping was previously conducted in 1993 and 1994 for the SR 58 environmental documentation; vegetation was mapped within 0.5 mile of the

proposed alignments, which included multiple alternatives (Caltrans et al. 1998). A general wildlife survey was conducted in 1993 and 1994 for the SR 58 environmental documentation (Caltrans et al. 1998). Focused surveys for special status species were conducted in 1993 and 1994. Surveys for special status plants were conducted within 300 feet of the alignment, and surveys for special status wildlife were conducted within 0.5 mile of the alignment (Caltrans et al. 1998). Consultation with the USFWS and the CDFG at that time determined that more extensive focused wildlife surveys were not necessary (Caltrans et al. 1998).

Vegetation mapping was updated in April/May 2008 to describe the current vegetation present in the BSA and to evaluate the BSA's potential to support special status plant and wildlife species. Focused surveys were not updated for this analysis; updated focused surveys will be conducted as part of the Tier II (project-level) documentation.

### **Jurisdictional Delineation**

The jurisdictional delineation previously prepared for SR 58 was conducted in April 1993 and February 1994 (Caltrans et al. 1998). Additional surveys were conducted in fall 1996 for the proposed Cross Valley Canal Alignment. The previous delineation was conducted based on the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). The jurisdictional delineation was not updated for this analysis; an updated jurisdictional delineation will be conducted as part of the Tier II (project-level) documentation.

## **Biological Conditions in the BSA**

### **Vegetation Types**

Vegetation types and other areas in the BSA include non-native grassland, disturbed valley saltbush scrub/valley sink scrub, riparian scrub, waterways, detention basin, disturbed/ruderal, agriculture, and developed/ornamental (Table 1; Figures 4A–4B). This section describes each of the vegetation types and other areas observed in the BSA.



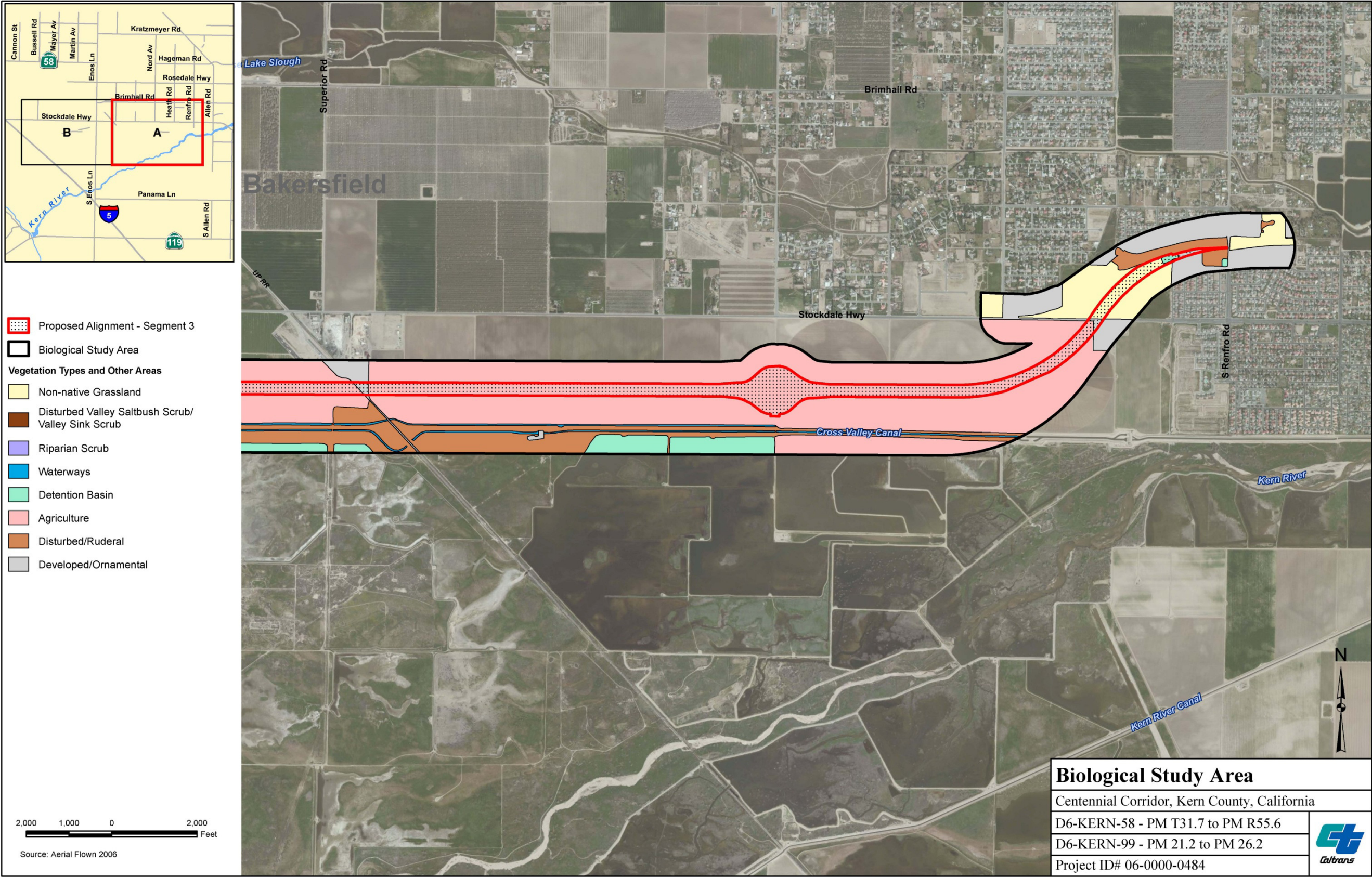
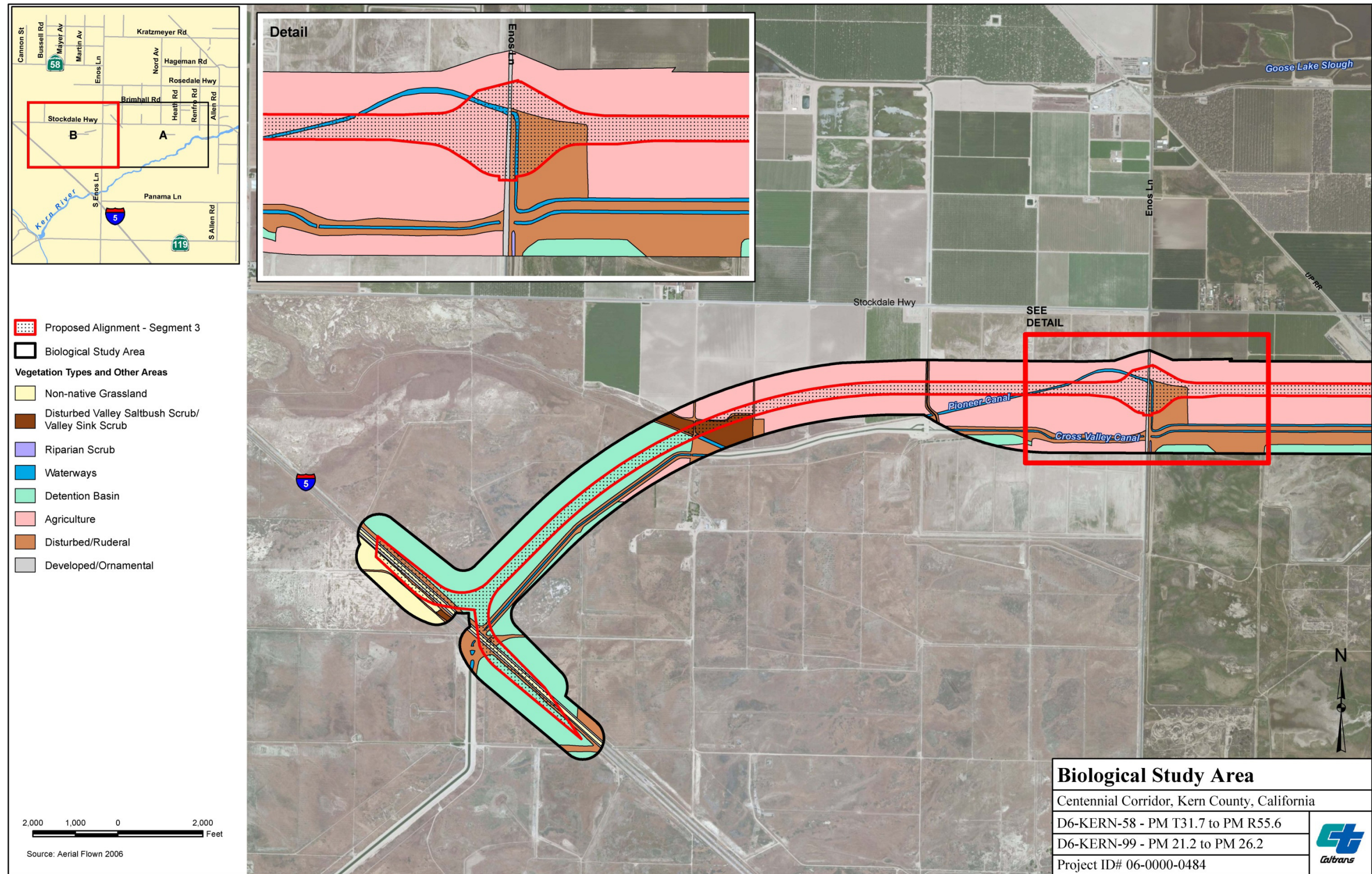


Figure 4A













**Table 1**  
**Vegetation Types and Other Areas Within the BSA**

Vegetation Types and Other Areas	Existing in BSA (Acres)
Non-Native Grassland	130.63
Disturbed Valley Saltbush Scrub/Valley Sink Scrub	22.85
Riparian Scrub	0.25
Waterways	51.55
Detention Basin	349.06
Disturbed/Ruderal	309.82
Agriculture	1,224.16
Developed/Ornamental	132.70
<b>Total</b>	<b>2,221.02</b>

### ***Non-native Grassland***

Non-native grassland is dominated by non-native annual grasses with native and non-native herbs. Dominant species include red brome (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), foxtail barley (*Hordeum murinum* var. *jeporinum*), Arizona chess (*Bromus arizonicus*), Mediterranean schismus (*Schismus barbatus*), foxtail fescue (*Vulpia myuros*), telegraph weed (*Heterotheca grandiflora*), long-beaked filaree (*Erodium botrys*), red-stemmed filaree (*Erodium cicutarium*), and common fiddleneck (*Amsinckia menziesii* var. *intermedia*). This vegetation type occurs north of Stockdale Highway at the eastern terminus of the BSA and west of I-5. These areas correspond to non-native grassland in previous documentation for the SR 58 Adoption Project (Caltrans et al. 1998).

### ***Disturbed Valley Saltbush Scrub/Valley Sink Scrub***

Disturbed valley saltbush scrub/valley sink scrub is dominated by an open cover of allscale (*Atriplex polycarpa*) with occasional individuals of big saltbush (*Atriplex lentiformis*). Red brome is abundant in spaces between the saltbush shrubs. Other species observed in this vegetation type include telegraph weed, narrow-leaved milkweed (*Asclepias fascicularis*), and Russian knapweed (*Acroptilon repens*). These areas are considered disturbed because there are numerous trails established by off-road vehicle use. This vegetation type is located in one area in the western portion of the BSA and in one area west of I-5. These areas correspond to valley saltbush scrub, which co-occurs with valley sink scrub, in previous documentation for the Westside Parkway and the SR 58 Adoption Project (Caltrans et al. 1998).

### **Riparian Scrub**

Riparian scrub occurs in a narrow strip adjacent to State Route 43 south of the Cross Valley Canal. This vegetation type consists of a small patch of willows (*Salix* spp.) and corresponds most closely to Great Valley cottonwood riparian forest in previous documentation for the SR 58 Adoption Project; however, the trees are much smaller in stature, and the community within the BSA does not contain any cottonwood (*Populus fremontii*) trees (Caltrans et al. 1998).

### **Waterways**

Canals in the BSA are mapped as waterways. The Cross Valley Canal is a concrete-lined channel bordered by wide dirt access roads; open water was present in this canal during the surveys. The Pioneer Canal is an unlined (soft-bottom) canal. It appears to be regularly maintained by disking or mowing. A sparse cover of non-native grasses (e.g., brome grasses [*Bromus* spp.]), mustards [*Brassica* spp. and *Descurainia* spp.]), may be present in the canals when water is not moving through them. These areas were not included as a separate mapping unit in the previous documentation (Caltrans et al. 1998).

### **Disturbed/Ruderal**

Disturbed/ruderal areas consist of recently graded or disked areas, dirt roads and trails, and cleared roadsides. These areas are generally devoid of vegetation or have a sparse cover of ornamental or weedy species. These areas occur scattered throughout the BSA. These areas were not included as a separate mapping unit in previous documentation for the SR 58 Adoption Project (Caltrans et al. 1998).

### **Detention Basin**

A series of fenced, bermed fields generally located on or near established canals function as temporary water-holding areas or detention basins for several Kern County water storage districts, including the Rosedale-Rio Bravo Water Storage District and the West Kern Water District. These basins appear to be occasionally maintained by mowing or disking. The vegetation within these basins varies from a sparse cover of native species common in wet habitats such as cattail (*Typha* spp.) and wild heliotrope (*Heliotropium curassavicum*) to dense stands of Russian thistle (*Salsola tragus*), an invasive non-native weed species. At the time of the survey, some basins had standing water and some of them were dry. Detention basins were not included as a separate vegetation type in the previous documentation (Caltrans et al. 1998).



### **Agriculture**

Agricultural areas in the BSA consist of fruit tree orchards or other open fields under active or recent cultivation. Actively cultivated fields and orchards are common in the BSA. These areas correspond to agricultural land in previous documentation for the SR 58 Adoption Project (Caltrans et al. 1998).

### **Developed/Ornamental**

Developed/ornamental areas in the BSA consist primarily of paved roadways, compacted road shoulders, and railroad tracks. This mapping unit also includes ornamental plantings interspersed with developed areas along I-5 and within residential areas at the eastern terminus of the BSA. Ornamental plant species observed in these areas include oleander (*Nerium oleander*), American sweet gum (*Liquidambar styraciflua*), olive (*Olea europaea*), and Mexican fan palm (*Washingtonia robusta*). These areas correspond to urban and developed land in previous documentation for the SR 58 Adoption Project (Caltrans et al. 1998).

### **Wildlife Habitat**

The BSA is rural in nature and is dominated by agricultural land uses. Some wildlife species can use agricultural lands, while others require more natural habitats, such as non-native grassland, disturbed valley saltbush scrub/valley sink scrub, and riparian scrub.

Amphibian and reptile species observed in the BSA include western toad (*Anaxyrus boreas* [*Bufo boreas*]), side-blotched lizard (*Uta stansburiana*), and California whiptail (*Aspidoscelis* [*Cnemidophorus*] *tigris mundus*) (Caltrans et al. 1998).

Bird species observed in the BSA include mallard (*Anas platyrhynchos*), bufflehead (*Bucephala albeola*), California quail (*Callipepla californica*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), greater roadrunner (*Geococcyx californianus*), belted kingfisher (*Megasceryle* [*Ceryle*] *alcyon*), American crow (*Corvus brachyrhynchos*), cliff swallow (*Petrochelidon pyrrhonota*), American pipit (*Anthus rubescens*), and brown-headed cowbird (*Molothrus ater*).

Mammal species observed in the BSA include desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), and coyote (*Canis latrans*).

## **Regional Species and Habitats of Concern**

### ***Natural Communities of Special Concern***

Special status natural communities reported from within ten miles of the BSA include coastal and valley freshwater marsh, Great Valley cottonwood riparian forest, Great Valley mesquite scrub, stabilized interior dunes, valley sacaton grassland, valley saltbush scrub, and valley sink scrub (CDFG 2008, 2009 and 2011). Approximately 0.25 acre of riparian scrub (similar to Great Valley cottonwood riparian forest but smaller in stature and extent) and 22.85 acres of disturbed valley saltbush scrub/valley sink scrub occur within the BSA.

### ***Special Status Plant Species***

Thirty-two special status plant species are known to occur in the project region (i.e., within a ten-mile radius surrounding the BSA) (Table 2). Of these, there is suitable habitat for 25 special status plant species. Two species were observed in the BSA during 1993/1994 focused surveys: Kern mallow (*Eremalche kernensis* [*E. parryi* ssp. *kernensis*]) and Hoover's eriastrum (*Eriastrum hooveri*) (Caltrans et al. 1998).

### ***Special Status Wildlife Species***

Forty-one special status wildlife species are known to occur in the project region (i.e., within a ten-mile radius surrounding the BSA) (Table 3). Of these, there is suitable habitat for 23 special status wildlife species. The following special status species (or sign of their presence) were observed in the BSA during 1993/1994 surveys: loggerhead shrike (*Lanius ludovicianus*), Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*) burrows and sign, and San Joaquin kit fox (*Vulpes macrotis mutica*).

**Table 2**  
**Special Status Plant Species Known to**  
**Occur in the Project Vicinity**

Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	—	—	1B.1	Meadows and seeps; playas/lake margins (alkaline).	HP	Potential to occur; suitable habitat present along unlined canals, detention basins, and wet places in non-native grassland; not observed during 1993/1994 focused surveys.
<i>Atriplex cordulata</i>	heartscale	—	—	1B.2	Vernal pools; saltbush scrub; meadows and seeps (saline or alkaline); valley and foothill grassland.	HP	Potential to occur; suitable habitat present along unlined canals, detention basins, wet places in non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Atriplex cordulata</i> var. <i>vallicola</i>	Lost Hills crownscale	—	—	1B.2	Saltbush scrub; valley and foothill grassland; vernal pools; alkali sinks.	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, wet places in non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Atriplex depressa</i>	brittlescale	—	—	1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools; alkaline or clay areas.	HP	Potential to occur; suitable habitat present along unlined canals, detention basins, and wet places in non-native grassland; not observed during 1993/1994 focused surveys.

Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Atriplex minuscula</i> <sup>b</sup>	lesser saltscale	–	–	1B.1	Saltbush scrub; grasslands; often in association with slough systems and river floodplains (sandy, alkaline).	HP	Potential to occur; suitable habitat present along unlined canals, detention basins, wet places in non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Atriplex tularensis</i>	Bakersfield smallscale	–	SE	1A	Alkali sinks; saltbush scrub.	HP	Potential to occur; suitable habitat present in disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Calochortus striatus</i>	alkali mariposa lily	–	–	1B.2	Alkali meadows; ephemeral washes; vernal moist depressions; seeps.	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, and wet places in non-native grassland; not observed during 1993/1994 focused surveys.
<i>Caulanthus californicus</i>	California jewelflower	FE	SE	1B.1	Saltbush scrub; pinyon and juniper woodland; valley and foothill grassland (sandy).	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Chloropyron molle</i> ssp. <i>hispidum</i> [ <i>Cordylanthus mollis</i> ssp. <i>hispidus</i> ]	hispid bird's beak	–	–	1B.1	Meadows and seeps; playas; valley and foothill grassland (alkaline).	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, or wet places in non-native grassland; not observed during 1993/1994 focused surveys.

Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Cirsium crassicaule</i>	slough thistle	—	—	1B.1	Saltbush scrub; marshes and swamps; (sloughs); riparian scrub.	HP	Suitable habitat present along unlined canals, detention basins, riparian scrub and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Clarkia tembloriensis</i> ssp. <i>calientensis</i>	Vasek's clarkia	—	—	1B.1	Valley and foothill grassland; elevations >1,000 feet above msl.	A	No potential to occur; outside reported elevational range; not observed during 1993/1994 focused surveys.
<i>Delphinium recurvatum</i>	recurved larkspur	—	—	1B.2	Saltbush scrub; cismontane woodland; valley and foothill grassland (alkaline).	HP	Potential to occur; suitable habitat present in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; not observed within selected alignment during 1993/1994 focused surveys, but observed elsewhere in the SR 58 Route Adoption BSA.
<i>Eremalche kernensis</i> [ <i>E. parryi</i> ssp. <i>kernensis</i> ] <sup>c</sup>	Kern mallow	FE	—	1B.1	Saltbush scrub; valley and foothill grassland.	HP/P	<b>Observed within BSA near the crossing of the Union Pacific Railroad and the Pioneer Canal during 1994 surveys</b> (Caltrans et. al. 1998); suitable habitat present along unlined canals, detention basins, non-native grassland, and disturbed valley saltbush scrub/valley sink scrub.

Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Eriastrum hooveri</i>	Hoover's eriastrum	Delisted	—	4.2	Saltbush scrub; pinyon-juniper woodland; valley and foothill grassland.	HP/P	<b>Observed within BSA near the crossing of the Union Pacific Railroad and the Pioneer Canal during 1994 surveys</b> (Caltrans et. al. 1998); suitable habitat present along unlined canals, detention basins, non-native grassland, and disturbed valley saltbush scrub/valley sink scrub.
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	Tejon poppy	—	—	1B.1	Saltbush scrub; valley and foothill grassland.	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Fritillaria striata</i>	striped adobe-lily	—	ST	1B.1	Cismontane woodland; valley and foothill grassland (adobe clay soil).	A	Not expected to occur; no suitable habitat (soils); not observed during 1993/1994 focused surveys.
<i>Imperata brevifolia</i>	California satintail	—	—	2B.1	Chaparral; coastal scrub; Mojavean desert scrub; meadows and seeps (often alkali); riparian scrub.	HP	Potential to occur; suitable habitat present along unlined canals, detention basins, riparian scrub; not observed during 1993/1994 focused surveys.
<i>Lasthenia ferrisiae</i>	Ferris' goldfields	—	—	4.2	Vernal pools, wet saline flats	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, and wet places in non-native grassland; not observed during 1993/1994 focused surveys.

Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	—	—	1B.1	Vernal pools, alkali flats	HP	Potential to occur; marginally suitable habitat present along unlined canals, detention basins, and wet places in non-native grassland; not observed during 1993/1994 focused surveys.
<i>Layia heterotricha</i>	pale-yellow layia	—	—	1B.1	Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland/ alkaline or clay; elevations between 650 and 5,900 feet above msl.	HP	Potential to occur; marginally suitable habitat present in non-native grassland; outside elevational range; not observed during 1993/1994 focused surveys.
<i>Layia leucopappa</i>	Comanche Point layia	—	—	1B.1	Open slopes in heavy soil; elevations between 490 and 1,150 feet above msl.	A	Not expected to occur; no suitable habitat (soils); outside reported elevation range; not observed during 1993/1994 focused surveys.
<i>Mimulus pictus</i>	Calico monkeyflower	—	—	1B.2	Bare, sunny areas around shrubs; rock outcrops on granitic soils.	A	Not expected to occur; no suitable habitat (soils); not observed during 1993/1994 focused surveys.
<i>Monardella linoides</i> ssp. <i>oblonga</i>	Tehachapi monardella	—	—	1B.3	Desert scrub, pinyon/juniper woodland, open conifer forest, subalpine; elevations between 2,950 and 7,545 feet above msl.	A	Not expected to occur; no suitable habitat; outside reported elevational range; not observed during 1993/1994 focused surveys.
<i>Monolopia [Lembertia] congdonii</i>	San Joaquin woollythreads	FE	—	1B.2	Saltbush scrub; valley and foothill grassland (sandy).	HP	Potential to occur; suitable habitat present in unlined canals, detention basin, non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.

Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Navarretia setiloba</i>	Piute Mountains navarretia	–	–	1B.1	Depressions in clay or gravelly loam; elevations between 1,640 and 6,890 feet above msl.	A	Not expected to occur; outside elevational range; not observed during 1993/1994 focused surveys.
<i>Opuntia basilaris</i> var. <i>treleasei</i>	Bakersfield cactus	FE	SE	1B.1	Saltbush scrub; cismontane woodland; valley and foothill grassland (sandy or gravelly).	HP	Potential to occur; marginally suitable habitat present in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	FT	SE	1B.1	Valley and foothill grassland (adobe clay soil).	A	Not expected to occur; no suitable habitat (soils); not observed during 1993/1994 focused surveys.
<i>Pterygoneurum californicum</i>	California chalk-moss	–	–	1B.1	Saltbush scrub; valley and foothill grassland (alkali).	HP	Potential to occur; marginally suitable habitat present in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Stylocline citroleum</i>	oil neststraw	–	–	1B.1	Saltbush scrub; mesquite scrub.	HP	Potential to occur; marginally suitable habitat present in disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Stylocline masonii</i>	Mason's neststraw	–	–	1B.1	Saltbush scrub; pinyon and juniper woodland/sandy.	HP	Potential to occur; marginally suitable habitat present in disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.



Scientific Name	Common Name	Status			General Habitat Description	Habitat Present (HP)/Species Present (P)/Habitat Absent (A)	Rationale (Potential for Species to Occur) <sup>a</sup>
		USFWS	CDFW	CNPS			
<i>Tortula californica</i>	California screw-moss	—	—	1B.2	Sandy soil.	HP	Potential to occur; suitable habitat present in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.
<i>Trichostema ovatum</i>	San Joaquin bluecurls	—	—	4.2	Saltbush scrub; valley and foothill grassland.	HP	Potential to occur; suitable habitat present in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 focused surveys.

**STATUS DESIGNATIONS****Federal Designations**

FE Listed by the federal government as an endangered species

FT Listed by the federal government as a threatened species

**State Designations**

SE Listed as endangered by the State of California

ST Listed as threatened by the State of California

**California Native Plant Society**

1B Plants rare, threatened, or endangered in California and elsewhere

2B Plants rare, threatened, or endangered in California and elsewhere

4 Plants that are limited in distribution in California

**California Native Plant Society Threat Code Extensions**

None Plants lacking any threat information

.1 Seriously endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat)

.2 Fairly endangered in California (20-80% of occurrences threatened)

.3 Not very endangered in California (less than 20% of occurrences threatened or no current threats known)

<sup>a</sup> Potential for species in the BSA is based on the biologist's best judgment based on the habitat quality within the BSA and known distributions of species within the region; focused surveys were conducted for special status plant species in 1993/1994 (Caltrans et al. 1998). However, a comment letter from CDFG (2008) stated that due to the length of time that has passed and because the alignment had changed since previous documentation was prepared, focused surveys would be required to determine the presence or absence of special status plant species.

<sup>b</sup> *Atriplex minuscula* formerly *A. minuscula* and *A. subtilis* (CNPS List 1B.2 species). Now considered to be one species (Jepson Flora Project 2007).

<sup>c</sup> A new species treatment was recently published for Kern mallow in the 2<sup>nd</sup> Edition of the Jepson Manual (The Jepson Flora Project 2007). Some records previously identified as Parry's mallow (*E. parryi*) have been determined to be Kern mallow based on the new key, and the range of Kern mallow has been found to extend beyond the area shown in the Recovery Plan for Upland Species (Cypher 2002). All vouchers of *Eremalche* previously collected should be re-examined and the identification of this species should be re-verified in the field.

Sources: Jepson Flora Project 2009, 2007; CNPS 2008, 2011; Caltrans et al. 1998; USFWS 1998; Twisselmann and Moe 1995; Hickman 1993; and Munz 1974.

**Table 3**  
**Special Status Wildlife Species Known to**  
**Occur in the Project Region**

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
Invertebrates						
<i>Branchinecta conservatio</i>	conservancy fairy shrimp	FE	–	Ephemeral freshwater habitats, such as vernal pools and swales; prefers large pools.	A	Not expected to occur; outside known range; no suitable habitat; not observed during 1993/1994 surveys.
<i>Branchinecta longiantenna</i>	longhorn fairy shrimp	FE	–	Ephemeral freshwater habitats, such as vernal pools and swales; prefers pools with very low conductivity, total dissolved solids, and alkalinity.	A	Not expected to occur; no suitable habitat (soils alkaline); not observed during 1993/1994 surveys.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	–	Ephemeral freshwater habitats, such as vernal pools and swales; prefers pools with very low conductivity, total dissolved solids, and alkalinity.	A	Not expected to occur; no suitable habitat; not observed during 1993/1994 surveys.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT	–	Associated with blue elderberry.	A	Not expected to occur; no elderberry observed during general surveys; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
Fish						
<i>Hypomesus transpacificus</i>	delta smelt	FT	ST	Sacramento-San Joaquin Delta.	A	Not expected to occur; outside known range; not observed during 1993/1994 surveys.
Amphibians						
<i>Spea hammondi</i>	western spadefoot	–	SSC	Washes, floodplains, alluvial fans, alkali flats; breeds in quiet streams, vernal pools, temporary ponds.	HP	May occur; suitable habitat in detention basins; not observed during 1993/1994 surveys.
<i>Rana draytonii</i>	California red-legged frog	FT	SSC	Variety of aquatic habitats in forests, woodlands, grasslands, and streamsides with deep, still, or slow-moving water; requires perennial water.	A	Not expected to occur; no suitable habitat; not observed during 1993/1994 surveys.
<i>Rana boylei</i>	foothill yellow-legged frog	–	SSC	Streams or rivers in woodlands, chaparral, and forests; requires perennial water.	A	Not expected to occur; no suitable habitat; not observed during 1993/1994 surveys.
Reptiles						
<i>Emys marmorata</i> [ <i>Actinemys marmorata pallida</i> ]	western pond turtle	–	SSC	Freshwater rivers, streams, lakes, ponds, vernal pools, and seasonal wetlands with basking sites.	HP	May occur; potentially suitable habitat along unlined canals and in detention basins; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
<i>Gambelia sila</i>	blunt-nosed leopard lizard	FE	SE/FP	Semiarid grasslands, alkali flats, washes.	HP	May occur; potentially suitable habitat in disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 surveys.
<i>Phrynosoma blainvillii</i> [ <i>Phrynosoma coronatum blainvillii</i> ]	coast horned lizard	—	SSC	Scrubland, grassland, coniferous forests, broadleaf woodlands.	HP	May occur; suitable habitat in non-native grassland and disturbed saltbush scrub/valley sink scrub; not observed during 1993/1994 surveys.
<i>Anniella pulchra pulchra</i>	silvery legless lizard	—	SSC	Loose, sandy soils in chaparral, pine-oak woodland, beach, and riparian areas.	HP	May occur; suitable habitat in unlined canals, riparian scrub, non-native grassland, and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 surveys.
<i>Masticophis flagellum ruddocki</i>	San Joaquin whipsnake	—	SSC	Variety of habitats including desert prairie, scrubland, juniper grassland, woodland, thorn forest, farmland.	HP	May occur; suitable habitat in unlined canals, non-native grassland, disturbed valley saltbush scrub/valley sink scrub, and agriculture; not observed during 1993/1994 surveys.
<i>Thamnophis gigas</i>	giant garter snake	FT	ST	Perennial fresh water with emergent wetland vegetation and basking sites.	A	Not expected to occur; outside current known range; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
Birds						
<i>Dendrocygna bicolor</i>	fulvous whistling-duck	—	SSC <sup>a</sup>	Forages in water with emergent vegetation; nests in freshwater wetlands and temporally flooded grasslands and pasture.	A	Not expected to occur; outside current known range; no suitable habitat (emergent vegetation); detention basin areas could develop suitable nesting habitat in wet years; not observed during 1993/1994 surveys.
<i>Gymnogyps californianus</i>	California condor	FE	SE/FP	Forages in open habitats such as savannahs, grasslands, and foothill chaparral; nests in caves, crevices, and ledges on cliffs.	A	Not expected to occur for foraging or nesting; suitable foraging habitat but not known to forage in project vicinity (USFWS 1999) <sup>h</sup> ; no suitable nesting habitat; not observed during general surveys.
<i>Aquila chrysaetos</i>	golden eagle	—	FP <sup>a,b</sup>	Forages in open habitats such as grasslands, deserts, or savannahs; nests in large trees or cliffs in mountainous areas.	HP (foraging) A (nesting)	May occur for foraging in winter; suitable foraging habitat; not expected to occur for nesting; no suitable nesting habitat; not observed during 1993/1994 surveys.
<i>Buteo swainsoni</i>	Swainson's hawk	—	ST <sup>a</sup>	Forages in grasslands and ruderal vegetation; breeds in open areas with scattered groves of trees.	HP	May occur for foraging and nesting during the breeding season; suitable foraging habitat within the BSA and potentially suitable nesting habitat along the Kern River south of the BSA; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
<i>Circus cyaneus</i>	northern harrier	—	SSC <sup>a</sup>	Forages in scrub, riparian, and grassland habitats; nests on ground in a variety of wetland and upland habitats.	HP	May occur for foraging and nesting; suitable foraging habitat; potentially suitable nesting habitat in non-native grasslands, unlined canals, and detention basins; not observed during 1993/1994 surveys.
<i>Elanus leucurus</i>	white-tailed kite	—	FP <sup>a</sup>	Forages in grasslands and scrublands; nests in oaks, willows, sycamores.	HP (foraging) A (nesting)	May occur for foraging; suitable foraging habitat; not expected to occur for nesting; no suitable nesting habitat; not observed during 1993/1994 surveys.
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted/FP <sup>a</sup>	Forages in a variety of habitats, particularly wetlands and coastal areas; nests in cliffs.	HP (foraging) A (nesting)	May occur for foraging in winter; not expected to occur for nesting; no suitable nesting habitat; not observed during 1993/1994 surveys.
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT <sup>a,c</sup>	SSC <sup>a,d</sup>	Barren sandy beaches and flats, alkali lakes.	A	Not expected to occur for nesting; no suitable nesting habitat; not observed during 1993/1994 surveys.
<i>Charadrius montanus</i>	mountain plover	--	SSC <sup>b</sup>	Grasslands or similar habitats (e.g., cultivated fields, fallow agricultural fields).	HP (wintering) A (nesting)	May occur for foraging in winter; suitable foraging habitat in detention basins and agricultural fields; nests outside project region; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FT <sup>a</sup>	SE <sup>a</sup>	Old-growth riparian habitats dominated by willows and cottonwoods with a dense understory.	A	Not expected to occur; no suitable habitat (riparian scrub not extensive enough); not observed during 1993/1994 surveys.
<i>Athene cunicularia</i>	burrowing owl		SSC <sup>e</sup>	Forages over open habitats such as grasslands and flat to low rolling hills in treeless terrain; also found in burrows along banks and roadsides.	HP	May occur for foraging and nesting; suitable foraging and nesting habitat present in all open space habitats in the BSA; not observed during 1993/1994 surveys.
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	SE	Riparian forest habitats typically dominated by willows with dense understory vegetation.	A	Not expected to occur; no suitable habitat (riparian scrub not extensive enough); not observed during 1993/1994 surveys.
<i>Lanius ludovicianus</i>	loggerhead shrike	—	SSC <sup>a</sup>	Grassland and other dry, open habitats.	HP/P	<b>Observed during 1993/1994 surveys</b> (Caltrans et al. 1998); suitable foraging and nesting habitat.
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE <sup>a</sup>	SE <sup>a</sup>	Riparian habitats dominated by willows with dense understory vegetation.	A	Not expected to occur; outside current known range; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
<i>Toxostoma lecontei</i>	Le Conte's thrasher	—	SSC <sup>f</sup>	Nests and forages in sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills with saltbush and/or cholla.	A	Not expected to occur; outside current known range; not observed during 1993/1994 surveys.
<i>Agelaius tricolor</i>	tricolored blackbird	—	SE/SSC <sup>g</sup>	Forages in wet pastures, agricultural fields, and seasonal wetlands; nests in marsh vegetation.	HP (foraging) A (nesting)	May occur for foraging in non-native grasslands, riparian scrub, detention basins and agricultural fields; not expected to nest; no suitable nesting habitat (marsh vegetation); detention basin areas could develop suitable nesting habitat in wet years; suitable nesting habitat not observed during general surveys; not observed during 1993/1994 surveys.
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	—	SSC <sup>a</sup>	Forages in wetlands and surrounding grasslands, croplands, or savannas; nests in emergent wetland vegetation over water.	HP (foraging) A (nesting)	May occur for foraging in non-native grasslands, riparian scrub, detention basins and agricultural fields; not expected to nest; no suitable nesting habitat (marsh vegetation); detention basin areas could develop suitable nesting habitat in wet years; suitable nesting habitat not observed during general surveys; not observed



Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
						during 1993/1994 surveys.
<b>Mammals</b>						
<i>Sorex ornatus relictus</i>	Buena Vista Lake ornate shrew	FE	SSC	Wetlands with dense vegetation and an abundant layer of detritus.	A	Not expected to occur; no suitable habitat; not observed during 1993/1994 surveys.
<i>Antrozous pallidus</i>	pallid bat	—	SSC	Forages in mixed oak and grasslands; roosts in rock crevices and tree cavities.	A	Not expected to occur; no suitable foraging or roosting habitat; not observed during 1993/1994 surveys.
<i>Eumops perotis</i>	western mastiff bat	—	SSC	Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban; roosts in crevices on cliff faces.	HP (foraging) HP (roosting)	May occur for foraging and roosting; suitable foraging and limited suitable roosting habitat; not observed during 1993/1994 surveys.
<i>Ammospermophilus nelsoni</i>	Nelson's [San Joaquin] antelope squirrel	—	ST	Arid annual grassland and shrubland with sparse to moderate shrub cover; friable soils for burrows.	HP	Limited potential to occur; potentially suitable habitat in non-native grasslands and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
<i>Dipodomys ingens</i>	giant kangaroo rat	FE	SE	Slopes in grasslands and shrub communities.	HP	Limited marginally suitable habitat in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; no burrows or characteristic haystacks were observed during 1993/1994 surveys.
<i>Dipodomys nitratoides brevinasus</i>	short-nosed kangaroo rat	—	SSC	Arid grasslands with scattered shrubs and shrublands; friable soils.	A	Not expected to occur; outside of current known range, distinguished from Tipton kangaroo rat based on range; not observed during 1993/1994 surveys.
<i>Dipodomys nitratoides nitratoides</i>	Tipton kangaroo rat	FE	SE	Alkali sink scrub and valley saltbrush scrub with widely scattered shrubs; fallow agricultural lands.	HP/P	<b>Observed, numerous burrows and sign were observed (no direct observation of individuals)</b> (Caltrans et al. 1998); suitable habitat in disturbed valley saltbush scrub/valley sink scrub and agricultural fields.
<i>Onychomys torridus tularensis</i>	Tulare grasshopper mouse	—	SSC	Arid shrubland communities.	HP	May occur; suitable habitat in disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 surveys.

Scientific Name	Common Name	Status		General Habitat Description	Habitat Present (HP)/Absent (A)* Species Present (P)	Rationale* (Potential for Species to Occur)
		USFWS	CDFW			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE	ST	Valley sink scrub, saltbush scrub, upper Sonoran scrub, annual grasslands, oil fields, urban areas.	HP/P	<b>Observed during 1993/1994 surveys</b> (Caltrans et al. 1998); suitable habitat present throughout BSA.
<i>Taxidea taxus</i>	American badger	—	SSC	Grasslands and other open habitats with friable, uncultivated soils.	HP	May occur; suitable habitat present in non-native grassland and disturbed valley saltbush scrub/valley sink scrub; not observed during 1993/1994 surveys.
<p><b>Federal Designations</b></p> <p>FE Listed by the federal government as an Endangered species</p> <p>FT Listed by the federal government as a Threatened species</p> <p>FC Candidate for federal listing as Threatened or Endangered</p> <p>PT Proposed for listing by the federal government as a Threatened species.</p> <p><b>State Designations</b></p> <p>SE Listed as Endangered by the State of California</p> <p>ST Listed as Threatened by the State of California</p> <p>SSC Species of Special Concern</p> <p>FP Fully Protected</p> <p>Note:</p> <p><sup>a</sup> Status refers to nesting individuals</p> <p><sup>b</sup> Status refers to wintering individuals</p> <p><sup>c</sup> Status refers to Pacific coastal population only</p> <p><sup>d</sup> Status refers to both coastal and interior populations</p> <p><sup>e</sup> Status refers to burrow sites</p> <p><sup>f</sup> Status refers only to the San Joaquin population, aka <i>T. l. macmillanorum</i>.</p> <p><sup>g</sup> Status refers to nesting colonies</p> <p><sup>h</sup> The USFWS BO for the Proposed SR 58 between SR 99 and I-5 states that California condor “are not likely to venture out onto the Valley floor east of I-5, where the proposed project is located” (USFWS 1998).</p> <p>* Findings for wildlife species are based on the biologist’s best judgment based on the habitat quality within the BSA and known distributions of species within the region.</p> <p>Sources: Garcia and Associates 2006; Caltrans et al. 1998; USFWS 1998.</p>						

## Discussion of Impacts and Mitigation

The determination of impacts in this analysis is based on a comparison of maps depicting the proposed project alignment and the vegetation map of the BSA (Figures 4A–4B). The permanent impact area consists of the proposed project’s right-of-way. For Segment 3, it is assumed that construction staging and access will occur within the alignment identified; therefore, no additional temporary impact area has been added. The proposed alignment would impact a total of 379.97 acres (Table 4).

**Table 4**  
**Vegetation Types and Other Areas That Would Be Impacted Within the BSA**

<b>Vegetation Types and Other Areas</b>	<b>Existing in BSA (Acres)</b>	<b>Project Impacts (Acres)</b>
Non-Native Grassland	130.63	25.92
Disturbed Valley Saltbush Scrub/Valley Sink Scrub	22.85	6.12
Riparian Scrub	0.25	0.00
Waterways	51.55	2.66
Detention Basin	349.06	68.41
Disturbed/Ruderal	309.82	25.36
Agriculture	1,224.16	251.50
<b>Total</b>	<b>2,088.32</b>	<b>379.97</b>

### Natural Communities of Special Concern

#### ***Disturbed Valley Sink Scrub/Valley Saltbush Scrub***

Valley saltbush scrub/valley sink scrub vegetation communities formerly surrounded the large San Joaquin Valley lakes (Kern, Buena Vista, Tulare, Goose), but have been substantially reduced due to flood control, agricultural developments, and ground water pumping (Holland 1986). This community also has a high potential to support special status plant and wildlife species. The loss of 6.12 acres of disturbed valley saltbush scrub/valley sink scrub would be considered substantial; impacts on this vegetation community should be avoided to the extent practicable.

### Jurisdictional Resources

Wetlands are defined as areas of land that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support—and that under normal circumstances do support—a prevalence of vegetation typically adapted for life in saturated soil conditions. To regulate activities in wetlands, federal and State

agencies have developed specific definitions and methods for identifying wetland boundaries. Identification methods, which vary among the agencies, focus on hydrologic, soil, and vegetative parameters. For sites to be identified as wetlands, they must have specific indicators of wetland conditions for each of these three parameters. Areas that contain some but not all three parameters are considered “Waters of the U.S.” (WOUS), which are regulated by the U.S. Army Corps of Engineers (USACE), and “Waters of the State”, which are regulated by the CDFW.

A jurisdictional delineation was conducted for Segment 3 and was verified by the USACE in October 1995. A jurisdictional delineation will be conducted again and reverified during preparation of Tier II documentation and will follow policies and instruction manuals in place at the time of Tier II analysis, as well as any guidance letters provided by regulatory agencies.

Multiple canals (i.e., waterways) and detention basins occur in the BSA. These areas may be under the jurisdiction of the USACE and/or the CDFW. Based on the vegetation types listed in Table 4, the proposed project could impact 71.07 acres (2.66 acres of waterways, 68.41 acres of detention basins) of jurisdictional resources. The regulatory agencies will require that Caltrans obtain necessary permits and provide mitigation for any impact on jurisdictional waters. Therefore, impacts on jurisdictional resources should be avoided to the extent practicable.

### **Special Status Plant Species**

Of the 32 special status plant species known to occur in the project region, 2 species were observed during the 1993/1994 surveys (Kern mallow and Hoover’s eriastrum) and 23 species have potential to occur in the BSA (Table 2). Focused surveys for special status plant species will be conducted and reverified during preparation of Tier II documentation and will follow protocols and search for species considered special status at the time of Tier II analysis. Based on the vegetation types listed in Table 4, the proposed project could impact 128.47 acres (25.92 acres non-native grassland, 6.12 acres disturbed saltbush scrub/valley sink scrub, 2.66 acres waterways, 68.41 acres detention basins, and 25.36 acres disturbed/ruderal) that could provide habitat for special status plant species. Any impact on a species listed as threatened or endangered would be considered substantial and will require authorization from the USFWS and/or CDFW prior to impacting the species location. The regulatory agencies will require that Caltrans obtain necessary permits and provide mitigation for any impact on listed species, and Caltrans will require that necessary mitigation will be provided for species considered locally rare (CNPS List

1B and 2 species). Therefore, impacts on undeveloped habitats (e.g., non-native grassland, disturbed valley saltbush scrub/valley sink scrub, and detention basins) should be avoided to the extent practicable.

### **Special Status Wildlife Species**

Of the 41 special status wildlife species known to occur in the project region, 3 species (or sign of their presence) were observed during the 1993/1994 surveys (loggerhead shrike, Tipton kangaroo rat, and San Joaquin kit fox) and 20 species have potential to occur in the BSA (Table 3). Focused surveys for special status wildlife species will be conducted and reverified during preparation of Tier II documentation and will follow protocols and search for species considered special status at the time of Tier II analysis. Based on the vegetation types listed in Table 4, the proposed project could impact 128.47 acres (25.92 acres non-native grassland, 6.12 acres disturbed saltbush scrub/valley sink scrub, 2.66 acres waterways, 68.41 acres detention basins, and 25.36 acres disturbed/ruderal) that could provide habitat for special status wildlife species. In addition, the proposed project would impact 251.50 acres of agricultural areas that could be used by some generalist species (species that use a variety of habitat types such as foraging raptors). Any impact on a species listed as threatened or endangered would be considered substantial and will require authorization from the USFWS and/or CDFW prior to impacting the species. The regulatory agencies will require that Caltrans obtain necessary permits and provide mitigation for any impact on listed species, and Caltrans will require that necessary mitigation will be provided for species considered locally rare (CDFW Species of Special Concern and Fully Protected species). Therefore, impacts on undeveloped habitats (e.g., non-native grassland, disturbed valley saltbush scrub/valley sink scrub, and detention basins) should be avoided to the extent practicable.

### **Recommendations**

This Tier I document addresses Segment 3 at a programmatic level; the Tier II document for Segment 3 will provide appropriate avoidance and minimization measures following the project-level analysis.

## **Natural Communities of Special Concern**

### ***Disturbed Valley Saltbush Scrub/Valley Sink Scrub***

#### ***Avoidance and Minimization Efforts***

Impacts on disturbed valley saltbush scrub/valley sink scrub should be avoided and minimized to the extent practicable. This vegetation type is expected to support listed species, and therefore, any impact on it would require compensatory mitigation.

#### ***Compensatory Mitigation***

Vegetation mapping shall be updated during project-level documentation. Any impact on disturbed valley saltbush scrub/valley sink scrub shall be compensated for by acquiring habitat of equal or superior quality at a ratio of 1:1 (one acre preserved for every acre disturbed). Any lands crossing the Kern Water Bank Habitat Conservation Plan (HCP) area shall be compensated at a 4:1 ratio through the Kern Water Bank HCP unless otherwise negotiated with the resource agencies.

### ***Jurisdictional Areas***

#### ***Avoidance and Minimization Efforts***

The jurisdictional delineation shall be updated during project-level documentation. Any impact on jurisdictional resources (i.e., riparian scrub, waterways, and detention basins) should be avoided and minimized to the extent practicable. These resources are protected and any impact on them would require compensatory mitigation, as negotiated with the USACE, the CDFW, and the Regional Water Quality Control Board (RWQCB).

Jurisdictional areas adjacent to the proposed impact area shall be protected from inadvertent disturbance by construction equipment and/or personnel, thus protecting plants and wildlife in the habitat adjacent to the impact area. Prior to grading and/or construction-related activities within 50 feet of areas under the jurisdiction of the USACE, the RWQCB, and the CDFW, the contractor shall install fencing or flagging to delineate the jurisdictional areas as an environmentally sensitive area (ESA). Placement of the fencing shall be done under the supervision of a qualified biologist. All personnel and equipment access to the ESA shall be prohibited unless approved by a qualified biologist. Additional avoidance and minimization measures may be required by the USACE, the CDFW, and the RWQCB.

#### ***Compensatory Mitigation***

The jurisdictional delineation shall be updated during project-level documentation. If jurisdictional resources will be impacted, Caltrans shall submit an application for a



USACE permit, a CDFW Streambed Alteration Agreement, and an RWQCB Water Quality Certification. Compensatory mitigation shall either consist of habitat replacement or payment of an in-lieu mitigation fee. The objective of the mitigation strategy shall be to ensure no net loss of habitat value as a result of project activities. The mitigation ratio shall be negotiated with the resource agencies and shall address impacts on jurisdictional resources. Caltrans shall implement the mitigation strategy, as approved by the resource agencies, according to the mitigation plan guidelines and performance standards.

### ***Special Status Plant Species***

#### ***Avoidance and Minimization Efforts***

The known locations of Kern mallow and Hoover's eriastrum should be avoided and minimized to the extent practicable. Kern mallow is a federally Endangered species and any impact on it would require compensatory mitigation, as negotiated with the USFWS (unless it is Delisted prior to preparation of project-level documentation). Hoover's eriastrum is a CNPS List 4.2 species; no compensatory mitigation would be required at this time, but its status will be re-evaluated during project-level documentation.

Pre-construction focused surveys for special status plant species shall be conducted by a qualified biologist within Segment 3 of the BSA during project-level documentation. Surveys shall be timed to occur during the appropriate blooming period of the target species and will be conducted in accordance with the most current protocols approved by the USFWS and the CDFW. If any special status plant species is present within the impact area of the proposed project, the impact would be considered potentially substantial depending on the number of individuals impacted. To the greatest extent practicable, efforts shall be made to avoid the species location during project design. If avoidance is not feasible, seed shall be collected from this species prior to construction and shall either be used within the project mitigation site or donated for use in habitat restoration.

#### ***Compensatory Mitigation***

If any special status plant species is observed within the impact area and cannot be avoided with avoidance and minimization measures, the project's impact on its regional population will be considered at the time of project-level documentation. If a federally or State listed species would be impacted, compensatory mitigation shall be required. Caltrans shall obtain a take authorization from the USFWS and/or CDFW (depending on the listing status of the species) prior to impacting the species. Caltrans

shall consult with the USFWS and/or CDFW to determine the appropriate conservation measures to mitigate for impacts on the species. The potential loss of habitat for a federally or State listed species resulting from implementation of the proposed project shall be mitigated at a no-net-loss ratio. The mitigation shall include payment to an in-lieu fee program; preservation or enhancement of occupied habitat for the species; or collection of seed within the impact area and planting within a mitigation site with the appropriate microhabitat for the species. A detailed mitigation and monitoring program shall be prepared by a qualified biologist and approved by the USFWS and/or CDFW.

### ***Special Status Wildlife Species***

#### ***Avoidance and Minimization Efforts***

Pre-construction habitat assessments/focused surveys for special status wildlife species shall be conducted by a qualified biologist within Segment 3 of the BSA during project-level documentation. Target species will likely include, but will not be limited to, blunt-nosed leopard lizard, Swainson's hawk, Nelson's antelope squirrel, giant kangaroo rat, Tipton kangaroo rat, and San Joaquin kit fox. Surveys shall be conducted in accordance with the most current protocols approved by the USFWS and the CDFW for target species. If any special status wildlife species is present within the proposed project impact area, the impact would be considered potentially substantial depending on the amount of habitat directly or indirectly impacted. To the greatest extent practicable, efforts shall be made to avoid the species' habitat during project design. The proposed project shall also avoid and/or minimize impacts on any HCP-identified reserve areas (i.e., Kern Water Bank HCP, Kern Valley Floor HCP). If avoidance is not feasible, conservation measures will be determined in consultation with Caltrans, the USFWS, and/or the CDFW depending on the species' listing status at the time of project-level documentation.

Project-level documentation shall develop avoidance and minimization measures for the San Joaquin kit fox using recommendations described in the *USFWS*

*Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), or a future version of these recommendations. In addition, project design modifications shall be identified that would reduce impacts on kit fox and can be incorporated into the design plans for the proposed project. The primary objective of the project design modifications shall be to maintain opportunities for kit foxes to cross over the road surface while reducing the potential for an unintentional increase in vehicle strikes. Project design modifications, when implemented together, are expected to reduce the potential for

adverse effects on kit fox. Final project design modifications shall be re-evaluated and adjusted accordingly during the final project design phase and submitted for review and approval to the USFWS and the CDFW.

To avoid impacts on nesting bird species of special concern (e.g., loggerhead shrike), a qualified biologist shall survey within the limits of project disturbance for the presence of an active nest. If nesting activity is present, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the *California Fish and Game Code*.

To avoid impacts on nesting raptors, a pre-construction survey for nesting raptors shall be conducted by a qualified biologist within the limits of project disturbance. If nesting activity is present, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the *California Fish and Game Code*.

### *Compensatory Mitigation*

If any special status wildlife species is observed within the impact area and cannot be avoided with avoidance and minimization measures, the project's impact on its regional population will be considered at the time of project-level documentation. If a federally or State listed species would be impacted, compensatory mitigation shall be required. Caltrans shall obtain a take authorization from the USFWS and/or the CDFW (depending on the listing status of the species) prior to impacting the species. Caltrans shall consult with the USFWS and/or the CDFW to determine the appropriate conservation measures to mitigate for impacts on the species. The potential loss of habitat for a federally or State listed species resulting from implementation of the proposed project shall be mitigated at a no-net-loss ratio. The mitigation shall include payment to an in-lieu fee program; preservation or enhancement of occupied habitat for the species; and/or relocation/exclusion of the species from the impact area. A detailed mitigation and monitoring program shall be prepared by a qualified biologist and approved by the USFWS and/or the CDFW.

Any impact affecting species within the Kern Water Bank HCP area shall be compensated at a 4:1 ratio through the Kern Water Bank HCP unless otherwise negotiated with the resource agencies. Any impact affecting species within the future Kern Valley Floor HCP (i.e., once an Implementation Agreement is in effect) shall be compensated following the guidelines of that plan, unless otherwise negotiated with the resource agencies.

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Non-native grassland near the western end of the BSA for Segment 3.



Disturbed Valley saltbush scrub/Valley sink scrub near the western end of the BSA for Segment 3.

### Site Photographs

Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484



**Attachment A**





Agriculture near the western end of the BSA for Segment 3. Adjacent fields are fallow.



Disturbed/ruderal area near the western end of the BSA for Segment 3.

### Site Photographs

Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484



**Attachment A**



## **Appendix C**   CNDDDB, CNPS, and USFWS Species List

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Print View

<https://map.dfg.ca.gov/rarefind/view/QuickElementListView.html>

CALIFORNIA DEPARTMENT OF  
FISH and WILDLIFE **RareFind**

**Query Summary:**

Quad IS (Weed Patch (3511828) OR Conner (3511921) OR Millux (3511922) OR Mouth of Kern (3511923) OR Taft (3511924) OR Oil Center (3511848) OR Lamont (3511838) OR Edison (3511837) OR Oildale (3511941) OR Rosedale (3511942) OR Stevens (3511932) OR Gosford (3511931) OR Rio Bravo (3511943) OR Buttonwillow (3511944) OR East Elk Hills (3511934) OR Tupman (3511933) OR North of Oildale (3511951))

Print Close

CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
<i>Agelaius tricolor</i>	tricolored blackbird	Birds	ABPBXB0020	431	4	None	Endangered	G2G3	S1S2	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_EN-Endangered   NABCI_RWL-Red Watch List   USFWS_BCC-Birds of Conservation Concern	Freshwater marsh   Marsh & swamp   Swamp   Wetland
<i>Ammospermophilus nelsoni</i>	Nelson's antelope squirrel	Mammals	AMAFB04040	254	69	None	Threatened	G2	S2	null	BLM_S-Sensitive   IUCN_EN-Endangered	Chenopod scrub
<i>Andrena macswaini</i>	An andrenid bee	Insects	IIHYM35130	7	1	None	None	G2	S2	null	null	null
<i>Anniella pulchra pulchra</i>	silvery legless lizard	Reptiles	ARACC01012	94	3	None	None	G3G4T3T4Q	S3	null	CDFW_SSC-Species of Special Concern   USFS_S-Sensitive	Chaparral   Coastal dunes   Coastal scrub
<i>Antrozous pallidus</i>	pallid bat	Mammals	AMACC10010	402	1	None	None	G5	S3	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFS_S-Sensitive   WBWG_H-High Priority	Chaparral   Coastal scrub   Desert wash   Great Basin grassland   Great Basin scrub   Mojavean desert scrub   Riparian woodland   Sonoran desert scrub   Upper montane coniferous forest   Valley & foothill grassland
<i>Ardea alba</i>	great egret	Birds	ABNGA04040	35	1	None	None	G5	S4	null	CDF_S-Sensitive   IUCN_LC-Least Concern	Brackish marsh   Estuary   Freshwater marsh   Marsh & swamp   Riparian forest   Wetland
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	Dicots	PDFAB0F421	14	7	None	None	G4G5T2T3	S1	1B.1	BLM_S-Sensitive	Alkali playa   Meadow & seep   Wetland
<i>Athene cunicularia</i>	burrowing owl	Birds	ABNSB10010	1862	72	None	None	G4	S3	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Coastal prairie   Coastal scrub   Great Basin grassland   Great Basin scrub   Mojavean desert scrub   Sonoran desert scrub   Valley & foothill grassland
<i>Atriplex cordulata</i> var. <i>cordulata</i>	heartscale	Dicots	PDCH040B0	68	5	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Chenopod scrub   Meadow & seep   Valley & foothill grassland
<i>Atriplex cordulata</i> var. <i>erecticaulis</i>	Earlhart orache	Dicots	PDCH042V0	21	1	None	None	G3T1	S1	1B.2	BLM_S-Sensitive	Valley & foothill grassland



Appendix C • CNDDDB, CNPS, and USFWS Species List

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<i>Atriplex coronata</i> var. <i>vallicola</i>	Lost Hills crownscale	Dicots	PDCHE04250	80	10	None	None	G4T2	S2	1B.2	BLM_S-Sensitive	Chenopod scrub   Valley & foothill grassland   Vernal pool   Wetland
<i>Atriplex minuscula</i>	lesser saltscall	Dicots	PDCHE042M0	37	2	None	None	G2	S2	1B.1	null	Alkali playa   Chenopod scrub   Valley & foothill grassland
<i>Atriplex subtilis</i>	subtle orache	Dicots	PDCHE042T0	24	2	None	None	G1	S1	1B.2	BLM_S-Sensitive	Valley & foothill grassland
<i>Atriplex tularensis</i>	Bakersfield smallscale	Dicots	PDCHE04240	3	2	None	Endangered	GX	SX	1A	null	Chenopod scrub   Meadow & seep
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Crustaceans	ICBRA03030	747	3	Threatened	None	G3	S2S3	null	IUCN_VU- Vulnerable	Valley & foothill grassland   Vernal pool   Wetland
<i>Buteo swainsoni</i>	Swainson's hawk	Birds	ABNKC19070	2394	6	None	Threatened	G5	S3	null	BLM_S-Sensitive   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Great Basin grassland   Riparian forest   Riparian woodland   Valley & foothill grassland
<i>Calochortus striatus</i>	alkali mariposa-lily	Monocots	PMLIL0D190	104	2	None	None	G3	S3	1B.2	BLM_S-Sensitive   SB_RSABG- Rancho Santa Ana Botanic Garden   USFS_S-Sensitive	Chaparral   Chenopod scrub   Meadow & seep   Mojavean desert scrub   Wetland
<i>Caulanthus californicus</i>	California jewelflower	Dicots	PDBRA31010	63	4	Endangered	Endangered	G1	S1	1B.1	null	Chenopod scrub   Pinon & juniper woodlands   Valley & foothill grassland
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	Birds	ABNNB03031	121	1	Threatened	None	G3T3	S2	null	CDFW_SSC- Species of Special Concern   NABCI_RWL-Red Watch List   USFWS_BCC-Birds of Conservation Concern	Great Basin standing waters   Sand shore   Wetland
<i>Charadrius montanus</i>	mountain plover	Birds	ABNNB03100	88	1	None	None	G3	S2?	null	BLM_S-Sensitive   CDFW_SSC- Species of Special Concern   IUCN_NT-Near Threatened   NABCI_RWL-Red Watch List   USFWS_BCC-Birds of Conservation Concern	Chenopod scrub   Valley & foothill grassland
<i>Chloropyron molle</i> ssp. <i>hispidum</i>	hispid salty bird's-beak	Dicots	PDSCROJ0D1	35	2	None	None	G2T2	S2	1B.1	BLM_S-Sensitive	Alkali playa   Meadow & seep   Wetland
<i>Cirsium crassicaule</i>	slough thistle	Dicots	PDAST2E0U0	18	2	None	None	G2	S2	1B.1	BLM_S-Sensitive	Chenopod scrub   Freshwater marsh   Marsh & swamp   Riparian scrub   Wetland
<i>Clarkia tembloriensis</i> ssp. <i>calientensis</i>	Vasek's clarkia	Dicots	PDONA05141	3	1	None	None	G3T1	S1	1B.1	BLM_S-Sensitive	Valley & foothill grassland
Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	Marsh	CTT52410CA	60	1	None	None	G3	S2.1	null	null	Marsh & swamp   Wetland
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Birds	ABNRB02022	119	1	Threatened	Endangered	G5T3Q	S1	null	BLM_S-Sensitive   NABCI_RWL-Red Watch List   USFS_S-Sensitive   USFWS_BCC-Birds of Conservation Concern	Riparian forest

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Danaus plexippus	monarch butterfly	Insects	IILEPP2010	334	4	None	None	G5	S3	null	USFS_S-Sensitive	Closed-cone coniferous forest
Delphinium recurvatum	recurved larkspur	Dicots	PDRAN0B1J0	96	14	None	None	G3	S3	1B.2	BLM_S-Sensitive	Chenopod scrub   Cismontane woodland   Valley & foothill grassland
Dendrocygna bicolor	fulvous whistling-duck	Birds	ABNJB01010	3	1	None	None	G5	S1	null	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Freshwater marsh   Marsh & swamp
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	204	1	Threatened	None	G3T2	S2	null	null	Riparian scrub
Dipodomys ingens	giant kangaroo rat	Mammals	AMAFD03080	124	34	Endangered	Endangered	G1G2	S1S2	null	IUCN_EN-Endangered	Chenopod scrub   Valley & foothill grassland
Dipodomys nitratoide brevinasus	short-nosed kangaroo rat	Mammals	AMAFD03153	68	34	None	None	G3T1T2	S1S2	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_VU-Vulnerable	Chenopod scrub   Valley & foothill grassland
Dipodomys nitratoide nitratoide	Tipton kangaroo rat	Mammals	AMAFD03152	77	33	Endangered	Endangered	G3T1T2	S1S2	null	IUCN_VU-Vulnerable	Chenopod scrub
Egretta thula	snowy egret	Birds	ABNGA06030	15	1	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp   Meadow & seep   Riparian forest   Riparian woodland   Wetland
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	158	1	None	None	G5	S3S4	null	BLM_S-Sensitive   CDFW_FP-Fully Protected   IUCN_LC-Least Concern	Cismontane woodland   Marsh & swamp   Riparian woodland   Valley & foothill grassland   Wetland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1137	6	None	None	G3G4	S3	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_VU-Vulnerable   USFS_S-Sensitive	Aquatic   Artificial flowing waters   Klamath/North coast flowing waters   Klamath/North coast standing waters   Marsh & swamp   Sacramento/San Joaquin flowing waters   Sacramento/San Joaquin standing waters   South coast flowing waters   South coast standing waters   Wetland
Eremalche kernensis	Kern mallow	Dicots	PDMAL0C031	86	8	Endangered	None	G3?T2Q	S2	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Chenopod scrub   Valley & foothill grassland
Eremophila alpestris actia	California horned lark	Birds	ABPAT02011	78	2	None	None	G5T3Q	S3	null	CDFW_WL-Watch List   IUCN_LC-Least Concern	Marine intertidal & splash zone communities   Meadow & seep
Eriastrum hooveri	Hoover's eriastrum	Dicots	PDPLM03070	47	18	Delisted	None	G3	S3	4.2	null	Chenopod scrub   Pinon & juniper woodlands   Valley & foothill grassland
Eschscholzia lemmonii ssp. kernensis	Tejon poppy	Dicots	PDPAP0A071	58	29	None	None	G5T2	S2	1B.1	null	Chenopod scrub   Valley & foothill grassland
Eumops perotis californicus	western mastiff bat	Mammals	AMACD02011	293	4	None	None	G5T4	S3S4	null	BLM_S-Sensitive   CDFW_SSC-Species of Special	Chaparral   Cismontane woodland



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											Concern   WBWG_H-High Priority	Coastal scrub   Valley & foothill grassland
Gambelia sila	blunt-nosed leopard lizard	Reptiles	ARACF07010	312	34	Endangered	Endangered	G1	S1	null	CDFW_FP-Fully Protected   IUCN_EN- Endangered	Chenopod scrub
Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	Riparian	CTT61410CA	56	2	None	None	G2	S2.1	null	null	Riparian forest
Great Valley Mesquite Scrub	Great Valley Mesquite Scrub	Riparian	CTT63420CA	7	5	None	None	G1	S1.1	null	null	Riparian scrub
Helminthoglypta callistoderma	Kern shoulderband	Mollusks	IMGASC2080	2	1	None	None	G1	S1	null	IUCN_EN- Endangered	Aquatic   Sacramento/San Joaquin flowing waters
Imperata brevifolia	California satintail	Monocots	PMPOA3D020	31	1	None	None	G3	S3	2B.1	SB_SBBG-Santa Barbara Botanic Garden   USFS_S- Sensitive	Chaparral   Coastal scrub   Meadow & seep   Mojavean desert scrub   Riparian scrub   Wetland
Lasiurus cinereus	hoary bat	Mammals	AMACC05030	235	1	None	None	G5	S4	null	IUCN_LC-Least Concern   WBWG_M-Medium Priority	Broadleaved upland forest   Cismontane woodland   Lower montane coniferous forest   North coast coniferous forest
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Dicots	PDAST5L0A1	89	1	None	None	G4T2	S2	1B.1	BLM_S-Sensitive   SB_RSABG- Rancho Santa Ana Botanic Garden	Alkali playa   Marsh & swamp   Salt marsh   Vernal pool   Wetland
Layia heterotricha	pale-yellow layia	Dicots	PDAST5N070	84	1	None	None	G2	S2	1B.1	BLM_S-Sensitive   SB_SBBG-Santa Barbara Botanic Garden   USFS_S- Sensitive	Cismontane woodland   Pinon & juniper woodlands   Valley & foothill grassland
Layia leucopappa	Comanche Point layia	Dicots	PDAST5N0A0	8	1	None	None	G1	S1	1B.1	BLM_S-Sensitive	Chenopod scrub   Valley & foothill grassland
Lithobates pipiens	northern leopard frog	Amphibians	AAABH01170	22	1	None	None	G5	S2	null	CDFW_SSC- Species of Special Concern   IUCN_LC-Least Concern	Freshwater marsh   Great Basin flowing waters   Great Basin standing waters   Marsh & swamp   Wetland
Lytta hoppingi	Hopping's blister beetle	Insects	IICOL4C010	5	1	None	None	G1G2	S1S2	null	null	null
Lytta moesta	moestan blister beetle	Insects	IICOL4C020	12	1	None	None	G2	S2	null	null	Valley & foothill grassland
Lytta morrisoni	Morrison's blister beetle	Insects	IICOL4C040	10	1	None	None	G1G2	S1S2	null	null	Valley & foothill grassland
Masticophis flagellum ruddocki	San Joaquin whipsnake	Reptiles	ARADB21021	86	5	None	None	G5T2T3	S2?	null	CDFW_SSC- Species of Special Concern	Chenopod scrub   Valley & foothill grassland
Mimulus pictus	calico monkeyflower	Dicots	PDSCR1B240	43	1	None	None	G2	S2	1B.2	BLM_S-Sensitive	Broadleaved upland forest   Cismontane woodland
Monolopia congdonii	San Joaquin woollythreads	Dicots	PDASTAB010	94	11	Endangered	None	G2	S2	1B.2	SB_UCBBG-UC Berkeley Botanical Garden	Chenopod scrub   Valley & foothill grassland
Navarretia setiloba	Piute Mountains navarretia	Dicots	PDPLM0C0S0	22	1	None	None	G2	S2	1B.1	BLM_S-Sensitive   USFS_S-Sensitive	Cismontane woodland   Pinon & juniper woodlands   Valley & foothill grassland

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Onychomys torridus tularensis	Tulare grasshopper mouse	Mammals	AMAFF06021	47	6	None	None	G5T1T2	S1S2	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern	Chenopod scrub
Opuntia basilaris var. treleasei	Bakersfield cactus	Dicots	PDCAC0D055	49	28	Endangered	Endangered	G5T1	S1	1B.1	null	Chenopod scrub   Cismontane woodland   Valley & foothill grassland
Perognathus inornatus	San Joaquin Pocket Mouse	Mammals	AMAFD01060	111	15	None	None	G2G3	S2S3	null	BLM_S-Sensitive	Cismontane woodland   Mojavean desert scrub   Valley & foothill grassland
Phrynosoma blainvillii	coast horned lizard	Reptiles	ARACF12100	727	8	None	None	G3G4	S3S4	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Chaparral   Cismontane woodland   Coastal bluff scrub   Coastal scrub   Desert wash   Pinon & juniper woodlands   Riparian scrub   Riparian woodland   Valley & foothill grassland
Plegadis chihi	white-faced ibis	Birds	ABNGE02020	20	1	None	None	G5	S3S4	null	CDFW_WL-Watch List   IUCN_LC-Least Concern	Marsh & swamp   Wetland
Sorex ornatus relictus	Buena Vista Lake ornate shrew	Mammals	AMABA01102	7	5	Endangered	None	G5T1	S1	null	CDFW_SSC-Species of Special Concern	Marsh & swamp   Riparian scrub
Spea hammondi	western spadefoot	Amphibians	AAABF02020	426	1	None	None	G3	S3	null	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_NT-Near Threatened	Cismontane woodland   Coastal scrub   Valley & foothill grassland   Vernal pool   Wetland
Stabilized Interior Dunes	Stabilized Interior Dunes	Dune	CTT23100CA	2	1	None	None	G1	S1.1	null	null	Interior dunes
Stylocline citreolum	oil neststraw	Dicots	PDAST8Y070	79	58	None	None	G2	S2	1B.1	BLM_S-Sensitive	Chenopod scrub   Coastal scrub
Stylocline masonii	Mason's neststraw	Dicots	PDAST8Y080	7	1	None	None	G1	S1	1B.1	BLM_S-Sensitive   USFS_S-Sensitive	Chenopod scrub   Desert wash   Pinon & juniper woodlands
Taxidea taxus	American badger	Mammals	AMAJF04010	476	8	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Alkali marsh   Alkali playa   Alpine   Alpine dwarf scrub   Bog & fen   Brackish marsh   Broadleaved upland forest   Chaparral   Chenopod scrub   Cismontane woodland   Closed-cone coniferous forest   Coastal bluff scrub   Coastal dunes   Coastal prairie   Coastal scrub   Desert dunes   Desert wash   Freshwater marsh   Great Basin grassland   Great Basin scrub   Interior dunes   lone formation   Joshua tree woodland

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													Limestone   Lower montane coniferous forest   Marsh & swamp   Meadow & seep   Mojavean desert scrub   Montane dwarf scrub   North coast coniferous forest   Oldgrowth   Pavement plain   Redwood   Riparian forest   Riparian scrub   Riparian woodland   Salt marsh   Sonoran desert scrub   Sonoran thorn woodland   Ultramafic   Upper montane coniferous forest   Upper Sonoran scrub   Valley & foothill grassland
Thamnophis gigas	giant garter snake	Reptiles	ARADB36150	345	4	Threatened	Threatened	G2	S2	null	IUCN_VU-Vulnerable	Marsh & swamp   Riparian scrub   Wetland	
Tortula californica	California screw moss	Bryophytes	NBMUS7L090	15	1	None	None	G2?	S2	1B.2	BLM_S-Sensitive	Chenopod scrub   Valley & foothill grassland	
Toxostoma lecontei	Le Conte's thrasher	Birds	ABPBK06100	226	6	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   NABCI_RWL-Red Watch List   USFWS_BCC-Birds of Conservation Concern	Desert wash   Mojavean desert scrub   Sonoran desert scrub	
Valley Sacaton Grassland	Valley Sacaton Grassland	Herbaceous	CTT42120CA	9	1	None	None	G1	S1.1	null	null	Valley & foothill grassland	
Valley Saltbush Scrub	Valley Saltbush Scrub	Scrub	CTT36220CA	19	10	None	None	G2	S2.1	null	null	Chenopod scrub	
Valley Sink Scrub	Valley Sink Scrub	Scrub	CTT36210CA	29	3	None	None	G1	S1.1	null	null	Chenopod scrub	
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	467	1	Endangered	Endangered	G5T2	S2	null	IUCN_NT-Near Threatened   NABCI_YWL-Yellow Watch List	Riparian forest   Riparian scrub   Riparian woodland	
Vulpes macrotis mutica	San Joaquin kit fox	Mammals	AMAJA03041	965	183	Endangered	Threatened	G4T2	S2	null	null	Chenopod scrub   Valley & foothill grassland	
Xanthocephalus xanthocephalus	yellow-headed blackbird	Birds	ABPBXB3010	11	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern	Marsh & swamp   Wetland	



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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

3 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35118B8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Atriplex tularensis</a>	Bakersfield smallscale	Chenopodiaceae	annual herb	1A	SX	GX
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Opuntia basilaris var. treleasei</a>	Bakersfield cactus	Cactaceae	perennial stem succulent	1B.1	S1	G5T1

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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## Plant List

3 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119B1

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Astragalus hornii var. hornii</a>	Horn's milk-vetch	Fabaceae	annual herb	1B.1	S1	G4G5T2T3
<a href="#">Atriplex cordulata var. cordulata</a>	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
<a href="#">Atriplex coronata var. vallicola</a>	Lost Hills crownscale	Chenopodiaceae	annual herb	1B.2	S2	G4T2

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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## Plant List

4 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35119B2

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Atriplex cordulata var. cordulata</a>	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
<a href="#">Calochortus striatus</a>	alkali mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
<a href="#">Delphinium recurvatum</a>	recurved larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3
<a href="#">Lasthenia glabrata ssp. coulteri</a>	Coulter's goldfields	Asteraceae	annual herb	1B.1	S2	G4T2

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

6 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119B3

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Atriplex cordulata var. cordulata</a>	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
<a href="#">Atriplex coronata var. coronata</a>	crownscale	Chenopodiaceae	annual herb	4.2	S3	G4T3
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Eriogonum gossypinum</a>	cottony buckwheat	Polygonaceae	annual herb	4.2	S3S4	G3G4
<a href="#">Stylocline citroleum</a>	oil neststraw	Asteraceae	annual herb	1B.1	S2	G2

### Suggested Citation

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

10 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119B4

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Astragalus hornii var. hornii</a>	Horn's milk-vetch	Fabaceae	annual herb	1B.1	S1	G4G5T2T3
<a href="#">Atriplex cordulata var. cordulata</a>	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
<a href="#">Atriplex coronata var. coronata</a>	crownscale	Chenopodiaceae	annual herb	4.2	S3	G4T3
<a href="#">Atriplex coronata var. vallicola</a>	Lost Hills crownscale	Chenopodiaceae	annual herb	1B.2	S2	G4T2
<a href="#">Caulanthus californicus</a>	California jewel-flower	Brassicaceae	annual herb	1B.1	S1	G1
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Eriogonum gossypinum</a>	cottony buckwheat	Polygonaceae	annual herb	4.2	S3S4	G3G4
<a href="#">Eschscholzia lemmonii ssp. kernensis</a>	Tejon poppy	Papaveraceae	annual herb	1B.1	S2	G5T2
<a href="#">Stylocline citroleum</a>	oil neststraw	Asteraceae	annual herb	1B.1	S2	G2

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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CNPS Inventory Results

<http://www.rareplants.cnps.org/result.html?adv=t&quad=35118D8;1>

# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

11 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35118D8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Azolla microphylla</a>	Mexican mosquito fern	Azollaceae	annual / perennial herb	4.2	S4	G5
<a href="#">Caulanthus californicus</a>	California jewel-flower	Brassicaceae	annual herb	1B.1	S1	G1
<a href="#">Clarkia exilis</a>	slender clarkia	Onagraceae	annual herb	4.3	S4	G4
<a href="#">Imperata brevifolia</a>	California satintail	Poaceae	perennial rhizomatous herb	2B.1	S3	G3
<a href="#">Mimulus pictus</a>	calico monkeyflower	Phrymaceae	annual herb	1B.2	S2	G2
<a href="#">Monardella linoides ssp. oblonga</a>	Tehachapi monardella	Lamiaceae	perennial rhizomatous herb	1B.3	S2	G5T2
<a href="#">Monolopia congdonii</a>	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2
<a href="#">Opuntia basilaris var. treleasei</a>	Bakersfield cactus	Cactaceae	perennial stem succulent	1B.1	S1	G5T1
<a href="#">Stylocline citroleum</a>	oil neststraw	Asteraceae	annual herb	1B.1	S2	G2
<a href="#">Tortula californica</a>	California screw-moss	Pottiaceae	moss	1B.2	S2	G2?
<a href="#">Trichostema ovatum</a>	San Joaquin bluecurls	Lamiaceae	annual herb	4.2	S4	G4

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

6 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35118C8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Astragalus hornii</a> var. <a href="#">hornii</a>	Horn's milk-vetch	Fabaceae	annual herb	1B.1	S1	G4G5T2T3
<a href="#">Atriplex tularensis</a>	Bakersfield smallscale	Chenopodiaceae	annual herb	1A	SX	GX
<a href="#">Chloropyron molle</a> ssp. <a href="#">hispidum</a>	hispid bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.1	S2	G2T2
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Imperata brevifolia</a>	California satintail	Poaceae	perennial rhizomatous herb	2B.1	S3	G3
<a href="#">Opuntia basilaris</a> var. <a href="#">trelasei</a>	Bakersfield cactus	Cactaceae	perennial stem succulent	1B.1	S1	G5T1

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

6 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35118C7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Caulanthus californicus</a>	California jewel-flower	Brassicaceae	annual herb	1B.1	S1	G1
<a href="#">Clarkia tembloriensis ssp. calientensis</a>	Vasek's clarkia	Onagraceae	annual herb	1B.1	S1	G3T1
<a href="#">Layia leucopappa</a>	Comanche Point layia	Asteraceae	annual herb	1B.1	S1	G1
<a href="#">Monolopia congdonii</a>	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2
<a href="#">Navarretia setiloba</a>	Piute Mountains navarretia	Polemoniaceae	annual herb	1B.1	S2	G2
<a href="#">Opuntia basilaris var. treleasei</a>	Bakersfield cactus	Cactaceae	perennial stem succulent	1B.1	S1	G5T1

### Suggested Citation

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

6 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35119D1

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Caulanthus californicus</a>	California jewel-flower	Brassicaceae	annual herb	1B.1	S1	G1
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Imperata brevifolia</a>	California satintail	Poaceae	perennial rhizomatous herb	2B.1	S3	G3
<a href="#">Monolopia congdonii</a>	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2
<a href="#">Opuntia basilaris</a> var. <a href="#">treleasei</a>	Bakersfield cactus	Cactaceae	perennial stem succulent	1B.1	S1	G5T1
<a href="#">Trichostema ovatum</a>	San Joaquin bluecurls	Lamiaceae	annual herb	4.2	S4	G4

### Suggested Citation

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

6 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35119D2

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Caulanthus californicus</a>	California jewel-flower	Brassicaceae	annual herb	1B.1	S1	G1
<a href="#">Delphinium recurvatum</a>	recurved larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Monolopia congdonii</a>	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2
<a href="#">Stylocline masonii</a>	Mason's neststraw	Asteraceae	annual herb	1B.1	S1	G1

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

8 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35119C2

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Astragalus hornii var. hornii</a>	Horn's milk-vetch	Fabaceae	annual herb	1B.1	S1	G4G5T2T3
<a href="#">Calochortus striatus</a>	alkali mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
<a href="#">Delphinium recurvatum</a>	recurved larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Goodmania luteola</a>	golden goodmania	Polygonaceae	annual herb	4.2	S3	G3
<a href="#">Hordeum intercedens</a>	vernal barley	Poaceae	annual herb	3.2	S3S4	G3G4
<a href="#">Monolopia congdonii</a>	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

8 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35119C1

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#"><u>Astragalus hornii var. hornii</u></a>	Horn's milk-vetch	Fabaceae	annual herb	1B.1	S1	G4G5T2T3
<a href="#"><u>Atriplex tularensis</u></a>	Bakersfield smallscale	Chenopodiaceae	annual herb	1A	SX	GX
<a href="#"><u>Chloropyron molle ssp. hispidum</u></a>	hispid bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.1	S2	G2T2
<a href="#"><u>Delphinium recurvatum</u></a>	recurved larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3
<a href="#"><u>Imperata brevifolia</u></a>	California satintail	Poaceae	perennial rhizomatous herb	2B.1	S3	G3
<a href="#"><u>Lasthenia ferrisiae</u></a>	Ferris' goldfields	Asteraceae	annual herb	4.2	S3	G3
<a href="#"><u>Pterygoneurum californicum</u></a>	California chalk moss	Pottiaceae	ephemeral moss	1B.1	SH	GH
<a href="#"><u>Stylocline masonii</u></a>	Mason's neststraw	Asteraceae	annual herb	1B.1	S1	G1

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

2 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119D3

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3

### Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 January 2015].

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

5 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119D4

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Atriplex cordulata var. erecticaulis</a>	Earlimart orache	Chenopodiaceae	annual herb	1B.2	S1	G3T1
<a href="#">Atriplex minuscula</a>	lesser saltscale	Chenopodiaceae	annual herb	1B.1	S2	G2
<a href="#">Atriplex subtilis</a>	subtle orache	Chenopodiaceae	annual herb	1B.2	S1	G1
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Monolopia congdonii</a>	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2

### Suggested Citation

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

9 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119C4

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Atriplex coronata var. coronata</a>	crownscale	Chenopodiaceae	annual herb	4.2	S3	G4T3
<a href="#">Atriplex coronata var. vallicola</a>	Lost Hills crownscale	Chenopodiaceae	annual herb	1B.2	S2	G4T2
<a href="#">Delphinium recurvatum</a>	recurved larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Eriogonum gossypinum</a>	cottony buckwheat	Polygonaceae	annual herb	4.2	S3S4	G3G4
<a href="#">Eschscholzia lemmonii ssp. kernensis</a>	Tejon poppy	Papaveraceae	annual herb	1B.1	S2	G5T2
<a href="#">Stylocline citroleum</a>	oil neststraw	Asteraceae	annual herb	1B.1	S2	G2
<a href="#">Trichostema ovatum</a>	San Joaquin bluecurls	Lamiaceae	annual herb	4.2	S4	G4

### Suggested Citation

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

12 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quad 35119C3

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#">Astragalus hornii var. hornii</a>	Horn's milk-vetch	Fabaceae	annual herb	1B.1	S1	G4G5T2T3
<a href="#">Atriplex cordulata var. cordulata</a>	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
<a href="#">Atriplex coronata var. coronata</a>	crownscale	Chenopodiaceae	annual herb	4.2	S3	G4T3
<a href="#">Atriplex coronata var. vallicola</a>	Lost Hills crownscale	Chenopodiaceae	annual herb	1B.2	S2	G4T2
<a href="#">Azolla microphylla</a>	Mexican mosquito fern	Azollaceae	annual / perennial herb	4.2	S4	G5
<a href="#">Cirsium crassicaule</a>	slough thistle	Asteraceae	annual / perennial herb	1B.1	S2	G2
<a href="#">Delphinium recurvatum</a>	recurved larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3
<a href="#">Eremalche kernensis</a>	Kern mallow	Malvaceae	annual herb	1B.1	S2	G3?T2Q
<a href="#">Eriastrum hooveri</a>	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3
<a href="#">Eriogonum gossypinum</a>	cottony buckwheat	Polygonaceae	annual herb	4.2	S3S4	G3G4
<a href="#">Eschscholzia lemmonii ssp. kernensis</a>	Tejon poppy	Papaveraceae	annual herb	1B.1	S2	G5T2
<a href="#">Stylocline citroleum</a>	oil neststraw	Asteraceae	annual herb	1B.1	S2	G2

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# CNPS *California Native Plant* Rare and Endangered Plant Inventory

## Plant List

1 matches found. *Click on scientific name for details*

### Search Criteria

Found in Quad 35119E1

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<a href="#"><u><i>Opuntia basilaris</i> var. <i>treleasei</i></u></a>	Bakersfield cactus	Cactaceae	perennial stem succulent	1B.1	S1	G5T1

### Suggested Citation

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## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

**Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825**



January 12, 2015

Document Number: 150112011645

Amber Oneal Heredia  
BonTerra Psomas  
2 Executive Circle Suite 175  
Irvine, CA 92614

Subject: Species List for Species List for Centennial Corridor

Dear: Mrs. Heredia

We are sending this official species list in response to your January 12, 2015 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be April 12, 2015.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found [http://www.fws.gov/sacramento/es/Branch-Contacts/es\\_branch-contacts.htm](http://www.fws.gov/sacramento/es/Branch-Contacts/es_branch-contacts.htm).

Endangered Species Division



**U.S. Fish & Wildlife Service**  
**Sacramento Fish & Wildlife Office**  
**Federal Endangered and Threatened Species that Occur in**  
**or may be Affected by Projects in the Counties and/or**  
**U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 150110013416

Current as of: January 10, 2015

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Quad Lists

Listed Species

Invertebrates

- Branchinecta lynchi*  
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle (T)

Fish

- Hypomesus transpacificus*  
delta smelt (T)

Amphibians

- Rana draytonii*  
California red-legged frog (T)

Reptiles

- Gambelia (=Crotaphytus) sila*  
blunt-nosed leopard lizard (E)
- Thamnophis gigas*  
giant garter snake (T)

Birds

- Charadrius alexandrinus nivosus*  
western snowy plover (T)
- Coccyzus americanus occidentalis*  
Western yellow-billed cuckoo (T)
- Empidonax traillii extimus*  
southwestern willow flycatcher (E)
- Gymnogyps californianus*  
California condor (E)

Mammals

- Dipodomys ingens*  
giant kangaroo rat (E)
- Dipodomys nitratoideis nitratoideis*  
Tipton kangaroo rat (E)
- Sorex ornatus relictus*  
Buena Vista Lake shrew (E)  
Critical habitat, Buena Vista Lake shrew (X)
- Vulpes macrotis mutica*  
San Joaquin kit fox (E)

Plants

Sacramento Fish & Wildlife Office Species List

[http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists.cfm)

*Caulanthus californicus*  
California jewelflower (E)  
*Eremalche kernensis*  
Kern mallow (E)  
*Monolopia congdonii* (= *Lembertia congdonii*)  
San Joaquin woolly-threads (E)  
*Opuntia treleasei*  
Bakersfield cactus (E)

Quads Containing Listed, Proposed or Candidate Species:

WEED PATCH (214B)  
CONNER (215A)  
MILLUX (215B)  
MOUTH OF KERN (216A)  
TAFT (216B)  
OIL CENTER (239B)  
LAMONT (239C)  
EDISON (239D)  
OILDALE (240A)  
ROSEDALE (240B)  
STEVENS (240C)  
GOSFORD (240D)  
RIO BRAVO (241A)  
BUTTONWILLOW (241B)  
EAST ELK HILLS (241C)  
TUPMAN (241D)  
NORTH OF OILDALE (263D)

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## County Lists

### Kern County

#### Listed Species

##### Invertebrates

*Branchinecta conservatio*  
Conservancy fairy shrimp (E)  
  
*Branchinecta longiantenna*  
Critical habitat, longhorn fairy shrimp (X)  
longhorn fairy shrimp (E)  
  
*Branchinecta lynchi*  
Critical habitat, vernal pool fairy shrimp (X)  
vernal pool fairy shrimp (T)  
  
*Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle (T)  
  
*Euproserpinus euterpe*  
Kern primrose sphinx moth (T)



Sacramento Fish & Wildlife Office Species List

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## Fish

*Hypomesus transpacificus*  
delta smelt (T)

## Amphibians

*Ambystoma californiense*  
California tiger salamander, central population (T)  
Critical habitat, CA tiger salamander, central population (X)

*Rana draytonii*  
California red-legged frog (T)  
Critical habitat, California red-legged frog (X)

## Reptiles

*Gambelia (=Crotaphytus) sila*  
blunt-nosed leopard lizard (E)

*Thamnophis gigas*  
giant garter snake (T)

## Birds

*Charadrius alexandrinus nivosus*  
western snowy plover (T)

*Coccyzus americanus occidentalis*  
Western yellow-billed cuckoo (PX)

*Empidonax traillii extimus*  
Critical habitat, southwestern willow flycatcher (X)  
southwestern willow flycatcher (E)

*Gymnogyps californianus*  
California condor (E)  
Critical habitat, California condor (X)

*Vireo bellii pusillus*  
Least Bell's vireo (E)

## Mammals

*Dipodomys ingens*  
giant kangaroo rat (E)

*Dipodomys nitratoideus nitratoideus*  
Tipton kangaroo rat (E)

*Ovis canadensis californiana*  
Sierra Nevada (=California) bighorn sheep (E)

*Sorex ornatus relictus*  
Buena Vista Lake shrew (E)  
Critical habitat, Buena Vista Lake shrew (X)

*Vulpes macrotis mutica*  
San Joaquin kit fox (E)

#### Plants

*Caulanthus californicus*  
California jewelflower (E)

*Eremalche kernensis*  
Kern mallow (E)

*Monolopia congdonii* (= *Lembertia congdonii*)  
San Joaquin woolly-threads (E)

*Opuntia treleasei*  
Bakersfield cactus (E)

*Pseudobahia peirsonii*  
San Joaquin adobe sunburst (T)

*Sidalcea keckii*  
Critical habitat, Keck's checker-mallow (X)  
Keck's checker-mallow (=checkerbloom) (E)

#### Candidate Species

##### Amphibians

*Rana muscosa*  
mountain yellow-legged frog (C)

##### Mammals

*Martes pennanti*  
fisher (C)

#### Key:

(E) *Endangered* - Listed as being in danger of extinction.  
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.  
(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.  
(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.  
*Critical Habitat* - Area essential to the conservation of a species.  
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.  
(C) *Candidate* - Candidate to become a proposed species.  
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.  
(X) *Critical Habitat* designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

### Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

### Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

### Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed



and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

### Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

### Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

### Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

### Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

### Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem.

Sacramento Fish & Wildlife Office Species List

[http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists.cfm)

However, we recommend that you get an updated list every 90 days. That would be April 10, 2015.



## **Appendix D** Plant and Wildlife Compendia



## PLANT SPECIES OBSERVED

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<b>FERNS AND FERN ALLIES</b>		
<b>AZOLLACEAE - MOSQUITO FERN FAMILY</b>		
<i>Azolla filiculoides</i> Pacific mosquito fern		x
<b>MARSILEACEAE - MARSILEA FAMILY</b>		
<i>Marsilea</i> sp. pepperwort	x	
<i>Marsilea vestita</i> ssp. <i>vestita</i> hairy pepperwort		x
<b>FLOWERING PLANTS</b>		
<b>CLASS DICOTYLEDONES (DICOTS)</b>		
<b>AIZOACEAE - FIG-MARIGOLD FAMILY</b>		
<i>Sesuvium verrucosum</i> western sea-purslane		x
<i>Trianthema portulacastrum</i> horse-purslane		x
<b>AMARANTHACEAE - AMARANTH FAMILY</b>		
<i>Amaranthus albus</i> * tumbleweed	x	x
<i>Amaranthus</i> sp. amaranthus	x	
<b>APIACEAE (UMBELLIFERAE) - CARROT FAMILY</b>		
<i>Ciclospermum leptophyllum</i> fir-leaved celery	x	
<i>Torilis arvensis</i> * torilis		x
<b>APOCYNACEAE - DOGBANE FAMILY</b>		
<i>Nerium oleander</i> * oleander	x	
<i>Trachelospermum jasminoides</i> * star jasmine	x	
<b>ARALIACEAE - GINSENG FAMILY</b>		
<i>Hedera helix</i> * English ivy	x	
<b>ASCLEPIADACEAE - MILKWEED FAMILY</b>		
<i>Asclepias fascicularis</i> narrow-leaved milkweed	x	x
<b>ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY</b>		
<i>Achillea</i> sp. yarrow	x	
<i>Acroptilon repens</i> * Russian knapweed		x
<i>Ambrosia acanthicarpa</i> annual bursage	x	x
<i>Ambrosia psilostachya</i> western ragweed	x	

**PLANT SPECIES OBSERVED**  
(Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Arida</i> [ <i>Machaeranthera</i> ] <i>carcosa</i> shrubby alkali aster		x
<i>Artemisia douglasiana</i> mugwort	x	x
<i>Artemisia dracunculus</i> tarragon	x	
<i>Baccharis salicifolia</i> mule fat	x	x
<i>Centaurea melitensis</i> * tocalote	x	x
<i>Centromadia</i> [ <i>Hemizonia</i> ] <i>pungens</i> ssp. <i>pungens</i> common spikeplant	x	
<i>Chaenactis glabriuscula</i> var. <i>glabriuscula</i> yellow pincushion	x	
<i>Chamomilla suaveolens</i> * common pineapple weed	x	x
<i>Cirsium occidentale</i> (?) cobweb thistle	x	
<i>Conyza bonariensis</i> * flax-leaved horseweed	x	x
<i>Conyza canadensis</i> common horseweed	x	x
<i>Conyza</i> sp. horseweed	x	
<i>Dimorphotheca sinuata</i> * blue-eyed cape marigold	x	
<i>Eriophyllum</i> sp. erriophyllum	x	
<i>Filago californica</i> fluffweed	x	x
<i>Gnaphalium luteo-album</i> * weedy cudweed	x	x
<i>Gnaphalium palustre</i> lowland cudweed	x	
<i>Gnaphalium</i> sp. everlasting	x	
<i>Helianthus annuus</i> western sunflower	x	x
<i>Helianthus</i> sp. sunflower	x	
<i>Hemizonia pallida</i> Kern tarplant	x	x
<i>Hemizonia pungens</i> ssp. <i>pungens</i> common spikeplant		x
<i>Heterotheca grandiflora</i> telegraph weed	x	x
<i>Heterotheca sessiliflora</i> golden aster	x	

**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Hypochaeris glabra</i> * smooth cat's ear	x	x
<i>Isocoma acradenia</i> (?) alkali goldenbush	x	
<i>Isocoma acradenia</i> var. <i>bracteosa</i> goldenbush		x
<i>Lactuca serriola</i> * prickly lettuce	x	x
<i>Lasthenia californica</i> California goldfields	x	x
<b><i>Lasthenia ferrisiae</i></b> <b>Ferris' goldfields</b>	x	
<i>Lasthenia minor</i> little goldfields		x
<i>Layia pentachaeta</i> ssp. <i>albida</i> white Sierra layia		x
<i>Lessingia glandulifera</i> var. <i>glandulifera</i> valley lessingia	x	x
<i>Lessingia nemaclada</i> lessingia		x
<i>Lessingia</i> sp. lessingia	x	
<i>Leucanthemum</i> sp.* Shasta daisy	x	
<i>Malacothrix coulteri</i> snake's-head		x
<i>Osteospermum fruticosum</i> * freeway daisy	x	
<i>Psilocarphus brevissimus</i> var. <i>brevissimus</i> dwarf woolly-heads		x
<i>Psilocarphus chilensis</i> [tenellus var. <i>globiferus</i> ] slender woolly-heads		x
<i>Rafinesquia californica</i> California chicory	x	
<i>Senecio vulgaris</i> * common groundsel	x	
<i>Silybum marianum</i> * milk thistle	x	
<i>Sonchus asper</i> ssp. <i>asper</i> * prickly sow-thistle	x	x
<i>Sonchus oleraceus</i> * common sow-thistle	x	x
<i>Stephanomeria exigua</i> ssp. <i>exigua</i> small wreath plant	x	
<i>Stephanomeria pauciflora</i> (?) wire-lettuce	x	



**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Stephanomeria virgata</i> tall wreath plant	x	
<i>Stephanomeria virgata</i> ssp. <i>pleurocarpa</i> wand stephanomeria		x
<i>Stephanomeria virgata</i> ssp. <i>virgata</i> tall wreath plant		x
<i>Stylocline gnaphaloides</i> everlasting nest straw		x
<i>Uropappus lindleyi</i> silver puffs	x	x
<i>Xanthium strumarium</i> cocklebur	x	x
<b>BETULACEAE - BIRCH FAMILY</b>		
<i>Alnus rhombifolia</i> white alder	x	
<b>BORAGINACEAE - BORAGE FAMILY</b>		
<i>Amsinckia menziesii</i> var. <i>intermedia</i> common fiddleneck	x	x
<i>Amsinckia menziesii</i> var. <i>menziesii</i> rigid fiddleneck	x	
<i>Amsinckia tessellata</i> Devil's lettuce		x
<i>Cryptantha</i> sp. cryptantha	x	
<i>Heliotropium curassavicum</i> salt heliotrope / alkali heliotrope	x	x
<i>Pectocarya linearis</i> ssp. <i>ferocula</i> slender pectocarya	x	
<i>Pectocarya penicillata</i> winged pectocarya	x	x
<i>Plagiobothrys arizonicus</i> Arizona popcornflower	x	
<i>Plagiobothrys canescens</i> valley popcornflower	x	x
<b>BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY</b>		
<i>Brassica nigra</i> * black mustard	x	
<i>Brassica tournefortii</i> * wild turnip	x	x
<i>Capsella bursa-pastoris</i> * shepherd's purse	x	x
<i>Coronopus didymus</i> * lesser wart cress	x	
<i>Descurainia pinnata</i> ssp. <i>glabra</i> tansy mustard	x	
<i>Descurainia sophia</i> * tansy mustard	x	

**PLANT SPECIES OBSERVED  
(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Descurainia</i> sp. tansy mustard	x	
<i>Guillenia lasiophylla</i> California mustard	x	
<i>Hirschfeldia incana</i> * shortpod mustard	x	x
<i>Lepidium dictyotum</i> var. <i>dictyotum</i> peppergrass		x
<i>Lepidium nitidum</i> peppergrass / shining peppergrass	x	
<i>Lepidium nitidum</i> var. <i>nitidum</i> peppergrass/shining peppergrass		x
<i>Raphanus sativus</i> * wild radish	x	
<i>Rorippa palustris</i> var. <i>occidentalis</i> Pacific yellow cress	x	x
<i>Sisymbrium altissimum</i> * tumble mustard	x	
<i>Sisymbrium irio</i> * London rocket	x	x
<i>Sisymbrium orientale</i> * hare's ear cabbage	x	x
CACTACEAE - CACTUS FAMILY		
<i>Opuntia ficus-indica</i> * Indian fig	x	
CAPPARACEAE - CAPER FAMILY		
<i>Wislizenia refracta</i> ssp. <i>californica</i> California jackass clover		x
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY		
<i>Sambucus mexicana</i> blue elderberry	x	x
CARYOPHYLLACEAE - PINK FAMILY		
<i>Herniaria hirsuta</i> ssp. <i>cinerea</i> * gray herniaria		x
<i>Loeflingia squarrosa</i> var. <i>squarrosa</i> California loeflingia	x	x
<i>Spergularia bocconeii</i> * Boccone's sand spurrey	x	x
<i>Spergularia macrotheca</i> var. <i>leucantha</i> white sticky sand spurrey		x
<i>Spergularia salina</i> [marina] salt-marsh sand spurrey		x
<i>Spergularia</i> sp. sand spurrey	x	
<i>Stellaria nitens</i> shiny chickweed	x	

**PLANT SPECIES OBSERVED**  
(Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>CHENOPODIACEAE</i> - GOOSEFOOT FAMILY		
<i>Allenrolfea occidentalis</i> iodine bush		x
<b><i>Atriplex cordulata</i></b> <b>heartscale</b>		x
<i>Atriplex lentiformis</i> big saltbush	x	
<i>Atriplex lentiformis</i> ssp. <i>lentiformis</i> big saltbush		x
<i>Atriplex lindleyi</i> * (?) Lindley's saltbush	x	
<b><i>Atriplex minuscula</i></b> <b>lesser saltbush</b>		x
<i>Atriplex phyllostegia</i> arrowscale		x
<i>Atriplex polycarpa</i> allscale	x	x
<i>Atriplex rosea</i> * tumbling oracle		x
<i>Atriplex semibaccata</i> * Australian saltbush		x
<i>Atriplex serenana</i> var. <i>serenana</i> bractscale		x
<i>Atriplex spinifera</i> spiny saltbush		x
<i>Bassia hyssopifolia</i> * five-hook bassia	x	x
<i>Chenopodium album</i> * lamb's quarters	x	x
<i>Chenopodium ambrosioides</i> * Mexican tea	x	
<i>Chenopodium berlandieri</i> pitseed goosefoot	x	
<i>Chenopodium desiccatum</i> pigweed	x	
<i>Chenopodium murale</i> * nettle-leaved goosefoot	x	
<i>Halogeton glomeratus</i> * halogeton		x
<i>Monolepis nuttalliana</i> Nuttall's monolepis		x
<i>Nitrophila occidentalis</i> American nitrophila		x
<i>Salsola paulsenii</i> * tumbleweed	x	

**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Salsola tragus</i> * Russian thistle	x	x
<i>Suaeda nigra</i> [moquinii] bush seepweed		x
CRASSULACEAE - STONECROP FAMILY		
<i>Crassula connata</i> pigmy-weed	x	x
CUCURBITACEAE - GOURD FAMILY		
<i>Cucurbita foetidissima</i> coyote melon / calabazilla	x	
CUSCUTACEAE - DODDER FAMILY		
<i>Cuscuta salina</i> [var. <i>salina</i> ] salty dodder		x
ELATINACEAE - WATERWORT FAMILY		
<i>Bergia texana</i> bergia		x
EUPHORBIACEAE - SPURGE FAMILY		
<i>Chamaesyce ocellata</i> ssp. <i>ocellata</i> prostrate spurge		x
<i>Eremocarpus setigerus</i> doveweed / turkey mullein	x	x
<i>Ricinus communis</i> * castor bean		x
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY		
<b><i>Astragalus hornii</i> var. <i>hornii</i></b> <b>Horn's milk-vetch</b>		x
<i>Astragalus lentiginosus</i> var. <i>nigricalycis</i> freckled milk-vetch		x
<i>Astragalus lentiginosus</i> var. <i>variabilis</i> freckled milk-vetch		x
<i>Cercidium</i> sp. palo verde	x	
<i>Cercis occidentalis</i> western redbud	x	
<i>Lotus purshianus</i> Spanish clover	x	
<i>Lotus purshianus</i> var. <i>purshianus</i> Spanish clover	x	x
<i>Lotus scoparius</i> deerweed/California broom		x
<i>Lotus strigosus</i> strigose lotus	x	
<i>Lupinus benthamii</i> spider lupine	x	
<i>Lupinus bicolor</i> miniature lupine	x	

**PLANT SPECIES OBSERVED  
(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Lupinus concinnus</i> bajada lupine	x	
<i>Lupinus microcarpus</i> var. <i>densiflorus</i> dense-flowered chick lupine	x	
<i>Lupinus nanus</i> sky lupine	x	x
<i>Lupinus succulentus</i> arroyo lupine	x	
<i>Medicago polymorpha</i> * California burclover	x	x
<i>Medicago sativa</i> * alfalfa		x
<i>Melilotus alba</i> * white sweet-clover	x	x
<i>Melilotus indica</i> * sourclover	x	x
<i>Prosopis glandulosa</i> var. <i>torreyana</i> mesquite/honey mesquite		x
<i>Robinia psuedoacacia</i> * black locust	x	
<i>Trifolium gracilentum</i> var. <i>gracilentum</i> pin-point clover	x	x
<i>Trifolium willdenovii</i> tomcat clover / valley clover	x	
<b>FAGACEAE - OAK / BEECH FAMILY</b>		
<i>Quercus agrifolia</i> coast live oak	x	
<i>Quercus lobata</i> valley oak	x	
<b>FRANKENIACEAE - ALKALI HEATH FAMILY</b>		
<i>Frankenia salina</i> alkali heath		x
<b>GERANIACEAE - GERANIUM FAMILY</b>		
<i>Erodium botrys</i> * long-beaked filaree	x	
<i>Erodium cicutarium</i> * red-stemmed filaree	x	x
<i>Erodium moschatum</i> * white-stemmed filaree	x	x
<b>JUGLANDACEAE - WALNUT FAMILY</b>		
<i>Juglans</i> sp.* walnut (cultivar)	x	
<b>LAMIACEAE (LABIATAE) - MINT FAMILY</b>		
<i>Marrubium vulgare</i> * common horehound	x	
<i>Trichostema lanceolatum</i> vinegar weed		x



**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Trichostema ovatum</i> San Joaquin bluecurls		x
LYTHRACEAE - LOOSESTRIFE FAMILY		
<i>Ammannia coccinea</i> valley red-stem		x
<i>Lythrum californicum</i> California loosestrife	x	x
MALVACEAE - MALLOW FAMILY		
<i>Eremalche kernensis</i> [E. parryi spp. kernensis] Kern mallow		x
<i>Eremalche parryi</i> spp. parryi Parry's mallow	x	
<i>Malva parviflora</i> * cheeseweed	x	x
MELIACEAE - MAHOGANY FAMILY		
<i>Melia azedarach</i> * chinaberry	x	
MOLLUGINACEAE - CARPETWEED FAMILY		
<i>Mollugo verticillata</i> * India carpetweed		x
MORACEAE - FIG FAMILY		
<i>Morus alba</i> * white mulberry	x	
MYRTACEAE - MYRTLE FAMILY		
<i>Eucalyptus</i> sp.* gum	x	x
OLEACEAE - OLIVE FAMILY		
<i>Fraxinus</i> sp.* ornamental ash	x	
ONAGRACEAE - EVENING PRIMROSE FAMILY		
<i>Camissonia californica</i> (?) mustard-like evening primrose	x	
<i>Camissonia campestris</i> ssp. <i>campestris</i> sun cups	x	x
<i>Camissonia kernensis</i> ssp. <i>gilmanii</i> Kern sun cups	x	
<i>Camissonia</i> sp. sun cups	x	
<i>Camissonia strigulosa</i> strigulose evening primrose	x	
<i>Ludwigia peploides</i> ssp. <i>peploides</i> yellow waterweed		x
<i>Oenothera deltoides</i> ssp. <i>cognata</i> dune evening primrose	x	x
<i>Oenothera primiveris</i> ssp. <i>primiveris</i> (?) desert evening primrose	x	

**PLANT SPECIES OBSERVED  
(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Oenothera speciosa</i> * showy-white evening primrose		x
OXALIDACEAE - WOOD-SORREL FAMILY		
<i>Oxalis pes-caprae</i> * Bermuda buttercup / sour grass	x	
PAPAVERACEAE - POPPY FAMILY		
<i>Eschscholzia caespitosa</i> tufted poppy	x	
<i>Eschscholzia</i> sp. annual poppy	x	
PLANTAGINACEAE - PLANTAIN FAMILY		
<i>Plantago erecta</i> dwarf plantain/California plantain		x
PLATANACEAE - SYCAMORE FAMILY		
<i>Platanus racemosa</i> western sycamore	x	x
POLEMONIACEAE - PHLOX FAMILY		
<b><i>Eriastrum hooverii</i></b> <b>Hoover's eriastrum</b>		x
<i>Eriastrum pluriflorum</i> many-flowered eriastrum		x
<i>Gilia tricolor</i> ssp. <i>diffusa</i> bird's eye gilia		x
POLYGONACEAE - BUCKWHEAT FAMILY		
<i>Chorizanthe</i> sp. spine-flower		x
<i>Eriogonum gracile</i> var. <i>gracile</i> slender buckwheat	x	
<i>Eriogonum gracillimum</i> annual buckwheat	x	x
<i>Eriogonum roseum</i> virgate buckwheat	x	
<i>Eriogonum</i> sp. buckwheat	x	
<i>Goodmania luteola</i> yellow goodmania		x
<i>Lastarriaea coriacea</i> lastarriaea	x	
<i>Polygonum amphibium</i> var. <i>emersum</i> water smartweed		x
<i>Polygonum arenastrum</i> * common knotweed	x	
<i>Polygonum aviculare</i> * prostrate knotweed		x
<i>Polygonum lapathifolium</i> willow weed	x	

**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Polygonum persicaria</i> * lady's thumb	x	
<i>Polygonum</i> sp. knotweed / smartweed	x	x
<i>Rumex crispus</i> * (?) curly dock	x	x
<i>Rumex maritimus</i> golden dock		x
<i>Rumex occidentalis</i> western dock		x
<i>Rumex</i> sp. dock	x	
<b>PORTULACACEAE - PURSLANE FAMILY</b>		
<i>Calandrinia ciliata</i> red maids	x	
<i>Portulaca oleracea</i> * common purslane	x	x
<b>RANUNCULACEAE - CROWFOOT FAMILY</b>		
<b><i>Delphinium recurvatum</i></b> <b>recurved larkspur</b>		x
<i>Myosurus minimus</i> little mouse-tail		x
<b>RESEDACEAE - MIGNONETTE FAMILY</b>		
<i>Oligomeris linifolia</i> narrow-leaved oligomeris		x
<b>ROSACEAE - ROSE FAMILY</b>		
<i>Pyracantha angustifolia</i> * firethorn	x	
<i>Rubus ursinus</i> California blackberry	x	
<b>SALICACEAE - WILLOW FAMILY</b>		
<i>Populus fremontii</i> ssp. <i>fremontii</i> Fremont cottonwood	x	x
<i>Salix alba</i> * white willow		x
<i>Salix exigua</i> narrow-leaved willow	x	x
<i>Salix gooddingii</i> black willow	x	x
<i>Salix laevigata</i> red willow	x	
<i>Salix lasiolepis</i> arroyo willow	x	
<i>Salix</i> sp. willow	x	

**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>SCROPHULARIACEAE</i> - FIGWORT FAMILY		
<i>Castilleja attenuata</i> narrow-leaved owl's clover		x
<i>Castilleja exserta</i> purple owl's clover	x	x
<i>Mimulus guttatus</i> seep monkeyflower	x	x
<i>Mimulus pilosus</i> downy monkeyflower	x	
<i>Verbascum thapsus</i> * woolly mullein	x	
<i>Veronica anagallis-aquatica</i> * great water speedwell	x	
<i>Veronica arvensis</i> * speedwell	x	
<i>Veronica peregrina</i> ssp. <i>xalapensis</i> pursland speedwell	x	x
<i>SIMAROUBACEAE</i> - QUASSIA FAMILY		
<i>Ailanthus altissima</i> * tree of heaven	x	
<i>SOLANACEAE</i> - NIGHTSHADE FAMILY		
<i>Datura wrightii</i> jimson weed	x	x
<i>Nicotiana acuminata</i> var. <i>multiflora</i> * many-flowered tobacco		x
<i>Nicotiana glauca</i> * tree tobacco	x	x
<i>Nicotiana quadrivalvis</i> Wallace's tobacco	x	
<i>Solanum elaeagnifolium</i> * white horse-nettle	x	
<i>Solanum lanceolatum</i> lanceleaf nightshade		x
<i>Solanum nigrum</i> black nightshade	x	
<i>Solanum sarrachoides</i> * (?) hairy nightshade		x
<i>TAMARICACEAE</i> - TAMARISK FAMILY		
<i>Tamarix ramosissima</i> * Mediterranean tamarisk	x	x
<i>ULMACEAE</i> - ELM FAMILY		
<i>Ulmus parvifolia</i> * Chinese elm	x	
<i>Ulmus</i> sp.* ornamental elm	x	

**PLANT SPECIES OBSERVED**  
(Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<b>URTICACEAE - NETTLE FAMILY</b>		
<i>Urtica dioica</i> ssp. <i>holosericea</i> hoary nettle	x	
<b>VERBENACEAE - VERVAIN FAMILY</b>		
<i>Phyla nodiflora</i> var. <i>nodiflora</i> garden lippia		x
<i>Verbena bracteata</i> bracted vervain		x
<b>VISCACEAE - MISTLETOE FAMILY</b>		
<i>Phoradendron macrophyllum</i> big leaf mistletoe	x	
<b>VITACEAE - GRAPE FAMILY</b>		
<i>Vitis californica</i> California wild grape	x	
<b>ZYGOPHYLLACEAE - CALTROP FAMILY</b>		
<i>Tribulus terrestris</i> * puncture vine	x	x
<b>CLASS MONOCOTYLEDONES (MONOCOTS)</b>		
<b>ARECACEAE (PALMAE) - PALM FAMILY</b>		
<i>Washingtonia filifera</i> California fan palm	x	
<i>Washingtonia robusta</i> * Mexican fan palm	x	
<b>CYPERACEAE - SEDGE FAMILY</b>		
<i>Cyperus odoratus</i> fragrant umbrella-sedge	x	x
<i>Cyperus</i> sp. sedge	x	
<i>Eleocharis acicularis</i> needle spike rush	x	
<i>Eleocharis macrostachya</i> perennial spike rush		x
<i>Scirpus acutus</i> var. <i>occidentalis</i> tule		x
<i>Scirpus maritimus</i> alkali bulrush		x
<i>Scirpus robustus</i> coastal bulrush / bultule	x	
<i>Scirpus</i> sp. bulrush	x	
<b>JUNCACEAE - RUSH FAMILY</b>		
<i>Juncus acutus</i> ssp. <i>leopoldii</i> southwestern spiny rush	x	
<i>Juncus balticus</i> baltic rush		x



**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Juncus bufonius</i> toad rush		x
<i>Juncus mexicanus</i> Mexican rush		x
<i>LEMNACEAE (ARACEAE)</i> - DUCKWEED FAMILY		
<i>Lemna</i> sp. duckweed	x	
<i>MELIACEAE</i> - MAHOGANY FAMILY		
<i>Melia azedarach</i> * chinaberry	x	
<i>POACEAE [GRAMINEAE]</i> - GRASS FAMILY		
<i>Agrostis avenacea</i> * Pacific bentgrass	x	
<i>Avena barbata</i> * slender wild oat	x	
<i>Avena fatua</i> * wild oat	x	x
<i>Bambusa</i> sp.* bamboo	x	
<i>Bromus arizonicus</i> Arizona chess	x	x
<i>Bromus diandrus</i> * ripgut grass	x	x
<i>Bromus hordeaceus</i> * soft chess	x	x
<i>Bromus madritensis</i> ssp. <i>rubens</i> * foxtail chess	x	x
<i>Bromus tectorum</i> * cheat grass	x	x
<i>Cynodon dactylon</i> * bermuda grass	x	
<i>Cynodon plectostachyus</i> * star grass		x
<i>Distichlis spicata</i> salt grass	x	x
<i>Echinochloa crus-galli</i> * barnyard grass	x	x
<i>Holcus lanatus</i> * common velvet grass		x
<i>Hordeum depressum</i> low/alkali barley		x
<i>Hordeum brachyantherum</i> meadow barley	x	
<i>Hordeum murinum</i> ssp. <i>glaucum</i> * glaucous barley		x
<i>Hordeum murinum</i> var. <i>leporinum</i> * foxtail barley	x	x

**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Hordeum vulgare</i> * cultivated barley	x	
<i>Leptochloa uninervia</i> Mexican sprangletop	x	x
<i>Leymus triticoides</i> beardless wild-rye	x	
<i>Lolium multiflorum</i> * Italian ryegrass		x
<i>Lolium perenne</i> * perennial ryegrass	x	
<i>Paspalum dilatatum</i> * dallis grass	x	
<i>Phalaris lemmonii</i> Lemmon's canary grass		x
<i>Poa annua</i> * annual bluegrass	x	x
<i>Poa secunda</i> one-sided bluegrass	x	
<i>Polypogon monspeliensis</i> * annual beard grass	x	x
<i>Schismus arabicus</i> * Arabian schismus	x	x
<i>Schismus barbatus</i> * Mediterranean schismus	x	x
<i>Sorghum halepense</i> * Johnson grass	x	
<i>Sporobolus airoides</i> alkali sacaton		x
<i>Vulpia microstachys</i> fescue	x	
<i>Vulpia microstachys</i> var. <i>pauciflora</i> Pacific fescue		x
<i>Vulpia myuros</i> * foxtail fescue	x	
<i>Vulpia myuros</i> var. <i>hirsuta</i> * foxtail fescue		x
<i>Vulpia</i> sp.* annual fescue		x
<b>PONTEDERIACEAE - PICKEREL-WEED FAMILY</b>		
<i>Eichhornia crassipes</i> * water hyacinth	x	x
<b>TYPHACEAE - CATTAIL FAMILY</b>		
<i>Typha latifolia</i> broad-leaved cattail		x

**PLANT SPECIES OBSERVED**  
**(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Typha</i> sp. cattail	x	
<p><i>* indicates non-native species</i></p> <p><sup>1</sup> Species observed during BonTerra Consulting 2008/2009 surveys; this column may include species observed in a portion of Segment 2 near Allen Road, which was included in the focused surveys in 2008.</p> <p><sup>2</sup> Species observed during 1993, 1994, and 2003 surveys (Bakersfield and FHA 2005; the Department 1998).</p>		

**WILDLIFE SPECIES OBSERVED**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<b>Amphibians</b>		
<b>BUFONIDAE - TRUE TOADS</b>		
<i>Bufo boreas</i> western toad		x
<b>RANIDAE - TRUE FROGS</b>		
<i>Rana catesbeiana</i> bullfrog *		x
<b>Reptiles</b>		
<b>PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE- BLOTCHED, AND HORNED LIZARDS</b>		
<i>Sceloporus occidentalis</i> western fence lizard		x
<i>Uta stansburiana</i> side-blotched lizard	x	x
<b>TEIIDAE - WHIPTAIL LIZARDS</b>		
<i>Aspidoscelis [Cnemidophorus] tigris mundus</i> California whiptail		x
<b>COLUBRIDAE - COLUBRID SNAKES</b>		
<i>Masticophis flagellum</i> coachwhip		x
<i>Pituophis catenifer</i> gopher snake		x
<b>Birds</b>		
<b>ANATIDAE - WATERFOWL</b>		
<i>Branta hutchinsii</i> cackling goose	x	
<i>Branta canadensis</i> Canada goose	x	
<i>Anas platyrhynchos</i> mallard	x	x
<i>Anas cyanoptera</i> cinnamon teal		x
<i>Anas clypeata</i> northern shoveler	x	
<i>Oxyura jamaicensis</i> ruddy duck		x
<b>PHASIANIDAE - PHEASANTS &amp; UPLAND GAME BIRDS</b>		
<i>Gallus gallus</i> * domestic chicken	x	
<b>ODONTOPHORIDAE - QUAILS</b>		
<i>Callipepla californica</i> California quail	x	x
<b>PODICIPEDIDAE - GREBES</b>		
<i>Podilymbus podiceps</i> pied-billed grebe	x	

### WILDLIFE SPECIES OBSERVED (Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Aechmophorus clarkii</i> Clark's grebe	x	
<b>PHALACROCORACIDAE - CORMORANTS</b>		
<i>Phalacrocorax auritus</i> double-crested cormorant	x	
<b>ARDEIDAE - HERONS</b>		
<i>Ardea herodias</i> great blue heron	x	x
<i>Ardea alba</i> great egret	x	x
<i>Egretta thula</i> snowy egret	x	
<i>Bubulcus ibis</i> cattle egret		x
<i>Butorides virescens</i> green heron		x
<i>Nycticorax nycticorax</i> black-crowned night-heron	x	x
<b>CATHARTIDAE - NEW WORLD VULTURES</b>		
<i>Cathartes aura</i> turkey vulture	x	x
<b>ACCIPITRIDAE - HAWKS</b>		
<i>Pandion haliaetus</i> osprey	x	
<i>Elanus leucurus</i> white-tailed kite		x
<i>Circus cyaneus</i> northern harrier		x
<i>Accipiter striatus</i> sharp-shinned hawk	x	
<i>Accipiter cooperii</i> Cooper's hawk	x	
<i>Buteo lineatus</i> red-shouldered hawk	x	
<i>Buteo jamaicensis</i> red-tailed hawk	x	x
<b>FALCONIDAE - FALCONS</b>		
<i>Falco sparverius</i> American kestrel	x	x
<i>Falco columbarius</i> merlin	x	
<b>RALLIDAE - RAILS</b>		
<i>Fulica americana</i> American coot	x	
<b>CHARADRIIDAE - PLOVERS</b>		
<i>Charadrius vociferus</i> killdeer	x	x

### WILDLIFE SPECIES OBSERVED (Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<b>RECURVIROSTRIDAE - STILTS &amp; AVOCETS</b>		
<i>Himantopus mexicanus</i> black-necked stilt		x
<i>Recurvirostra americana</i> American avocet		x
<b>LARIDAE - GULLS &amp; TERNS</b>		
<i>Larus californicus</i> California gull	x	x
<i>Hydroprogne caspia</i> Caspian tern	x	x
<b>COLUMBIDAE - PIGEONS &amp; DOVES</b>		
<i>Columba livia</i> rock pigeon *	x	x
1.1 <i>Streptopelia decaocto</i> Eurasian collared-dove *	x	
<i>Zenaida macroura</i> mourning dove	x	x
<b>PSITTACIDAE - PARAKEETS &amp; PARROTS</b>		
<i>Psittacula krameri</i> ** rose-ringed parakeet	x	
<b>CUCULIDAE - CUCKOOS &amp; ROADRUNNERS</b>		
<i>Geococcyx californianus</i> greater roadrunner	x	x
<b>STRIGIDAE - TRUE OWLS</b>		
<i>Athene cunicularia</i> burrowing owl		x
<b>CAPRIMULGIDAE - GOATSUCKERS</b>		
<i>Chordeiles acutipennis</i> lesser nighthawk		x
<b>TROCHILIDAE - HUMMINGBIRDS</b>		
<i>Archilochus alexandri</i> black-chinned hummingbird	x	
<i>Calypte anna</i> Anna's hummingbird	x	
<b>ALCEDINIDAE - KINGFISHERS</b>		
<i>Megaceryle [Ceryle] alcyon</i> belted kingfisher	x	
<b>PICIDAE - WOODPECKERS</b>		
<i>Picoides nuttallii</i> Nuttall's woodpecker	x	
<i>Picoides pubescens</i> downy woodpecker	x	
<i>Picoides villosus</i> hairy woodpecker	x	
<i>Colaptes auratus</i>	x	



### WILDLIFE SPECIES OBSERVED (Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
northern flicker		
<b>TYRANNIDAE - TYRANT FLYCATCHERS</b>		
<i>Sayornis nigricans</i> black phoebe	x	
<i>Sayornis saya</i> Say's phoebe		x
<i>Myiarchus cinerascens</i> ash-throated flycatcher	x	
<i>Tyrannus vociferans</i> Cassin's kingbird		x
<i>Tyrannus verticalis</i> western kingbird	x	x
<b>LANIIDAE - SHRIKES</b>		
<i>Lanius ludovicianus</i> loggerhead shrike	x	x
<b>CORVIDAE - JAYS &amp; CROWS</b>		
<i>Aphelocoma californica</i> western scrub-jay	x	
<i>Corvus brachyrhynchos</i> American crow	x	x
<i>Corvus corax</i> common raven	x	x
<b>ALAUDIDAE - LARKS</b>		
<i>Eremophila alpestris</i> horned lark	x	
<b>HIRUNDINIDAE - SWALLOWS</b>		
<i>Tachycineta bicolor</i> tree swallow	x	
<i>Tachycineta thalassina</i> violet-green swallow	x	
<i>Stelgidopteryx serripennis</i> northern rough-winged swallow	x	
<i>Petrochelidon pyrrhonota</i> cliff swallow	x	x
<i>Hirundo rustica</i> barn swallow	x	
<b>AEGITHALIDAE - BUSHTITS</b>		
<i>Psaltiriparus minimus</i> bushtit	x	
<b>TROGLODYTIDAE - WRENS</b>		
<i>Thryomanes bewickii</i> Bewick's wren	x	
<i>Troglodytes aedon</i> house wren	x	
<b>REGULIDAE - KINGLETS</b>		
<i>Regulus calendula</i> ruby-crowned kinglet	x	

**WILDLIFE SPECIES OBSERVED  
(Continued)**

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<b>SYLVIIDAE - GNATCATCHERS</b>		
<i>Polioptila caerulea</i> blue-gray gnatcatcher	x	
<b>TURDIDAE - THRUSHES &amp; ROBINS</b>		
<i>Sialia mexicana</i> western bluebird		x
<i>Turdus migratorius</i> American robin	x	
<b>MIMIDAE - THRASHERS</b>		
<i>Mimus polyglottos</i> northern mockingbird	x	x
<i>Toxostoma redivivum</i> California thrasher	x	
<b>STURNIDAE - STARLINGS</b>		
<i>Sturnus vulgaris</i> European starling *	x	x
<b>PARULIDAE - WARBLERS</b>		
<i>Vermivora celata</i> orange-crowned warbler	x	
<i>Dendroica petechia</i> yellow warbler	x	
<i>Dendroica coronata</i> yellow-rumped warbler	x	
<i>Wilsonia pusilla</i> Wilson's warbler	x	
<b>EMBERIZIDAE - SPARROWS &amp; JUNCOS</b>		
<i>Pipilo maculatus</i> spotted towhee	x	
<i>Pipilo crissalis</i> California towhee	x	
<i>Spizella passerina</i> chipping sparrow	x	
<i>Spizella breweri</i> Brewer's sparrow	x	
<i>Chondestes grammacus</i> lark sparrow	x	
<i>Passerculus sandwichensis</i> savannah sparrow	x	
<i>Passerella iliaca</i> fox sparrow	x	
<i>Melospiza melodia</i> song sparrow	x	x
<i>Melospiza lincolni</i> Lincoln's sparrow	x	
<i>Zonotrichia leucophrys</i> white-crowned sparrow	x	x
<i>Zonotrichia atricapilla</i> golden-crowned sparrow	x	

### WILDLIFE SPECIES OBSERVED (Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<i>Junco hyemalis</i> dark-eyed junco	x	
<b>CARDINALIDAE - GROSBEAKS &amp; BUNTINGS</b>		
<i>Pheucticus melanocephalus</i> black-headed grosbeak	x	
<b>ICTERIDAE - BLACKBIRDS</b>		
<i>Agelaius phoeniceus</i> red-winged blackbird	x	
<i>Sturnella neglecta</i> western meadowlark	x	x
<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird		x
<i>Euphagus cyanocephalus</i> Brewer's blackbird	x	x
<i>Quiscalis mexicanus</i> great-tailed grackle	x	
<i>Molothrus ater</i> brown-headed cowbird	x	x
<i>Icterus falbula</i> Baltimore oriole		x
<i>Icterus bullockii</i> Bullock's oriole	x	
<b>FRINGILLIDAE - FINCHES</b>		
<i>Carpodacus mexicanus</i> house finch	x	x
<i>Carduelis psaltria</i> lesser goldfinch	x	
<i>Carduelis lawrencei</i> Lawrence's goldfinch	x	
<i>Carduelis tristis</i> American goldfinch	x	
<b>PASSERIDAE - OLD WORLD SPARROWS</b>		
<i>Passer domesticus</i> house sparrow *	x	
<b>Mammals</b>		
<b>LEPORIDAE - HARES &amp; RABBITS</b>		
<i>Sylvilagus audubonii</i> desert cottontail	x	x
<i>Lepus californicus</i> black-tailed jackrabbit	x	x
<b>SCIURIDAE - SQUIRRELS</b>		
<i>Spermophilus beecheyi</i> California ground squirrel	x	x
<i>Ammospermophilus nelsoni</i> Nelson's [San Joaquin] antelope squirrel		x

### WILDLIFE SPECIES OBSERVED (Continued)

Species	Segment 1 <sup>1</sup>	Segments 2 and 3 <sup>2</sup>
<b>GEOMYIDAE - POCKET GOPHERS</b>		
<i>Thomomys bottae</i> Botta's pocket gopher		x
<b>HETEROMYIDAE - POCKET MICE &amp; KANGAROO RATS</b>		
<i>Dipodomys heermanni</i> Heermann's kangaroo rat		x
<b>CANIDAE - WOLVES &amp; FOXES</b>		
<i>Canis latrans</i> coyote		x
<i>Canis familiaris</i> domestic dog	x	
<i>Vulpes macrotis mutica</i> San Joaquin kit fox		x
<i>Vulpes vulpes</i> red fox	x	x
<b>MUSTELIDAE - WEASELS, SKUNKS &amp; OTTERS</b>		
<i>Mephitis mephitis</i> striped skunk		x
<i>Taxidea taxus</i> American badger		x
<b>FELIDAE - CATS</b>		
<i>Felis catus</i> domestic cat	x	
* introduced species		
<sup>1</sup> Species observed during BonTerra Consulting 2008/2009 surveys; this column may include species observed in a portion of Segment 2 near Allen Road, which was included in the focused surveys in 2008. <sup>2</sup> Species observed during 1993, 1994, and 2003 surveys (Bakersfield and FHA 2005; the Department 1998).		

